

CHAPTER V :

MATERIAL-CULTURE AS REPRESENTED IN THE ILLUSTRATIONS(A) CLOTHES, DRAPERIES AND SPREADABLES

The illustrations contain a panorama of rich dresses which an Indian writer writing on the costumes represented in Mughal pictorial art would consider to be helpful in giving an insight into the course of the Mughal fashions. Unfortunately the descriptions of the various clothes depicted are inadequately found in contemporary sources, marking the identification of their names very difficult. The Ain contains a list of the articles of Akbar's wardrobe. It is also reported there that the king had changed the names of a few dresses drawing on Hindi usages and, as having made some minor alterations in the forms. Thus the word jama was replaced by sar-liagti, izar (drawers) became yan-pirahan, nimtana was called by the name of tanzeb, patgat was adopted for fauta, chitragupita was preferred to burqa, kulah was given the name of sis shobha, mubaf (hair-ribbon) was changed for kesghan, the loin-cloth called patka assumed the nomenclature of katzeb, shal was replaced by parmanaram and paey-afzar, that is the shoe, acquired the descriptive name of charan-dharan. The Hindi equivalents help us to some extent in determining at least the uses of these clothes, the Persian names

1. Constumes of India and Pakistan; p. 48.

2. Ain (Bloch.), Vol. I, pp. 94-98.

3. Ibid; p. 96.

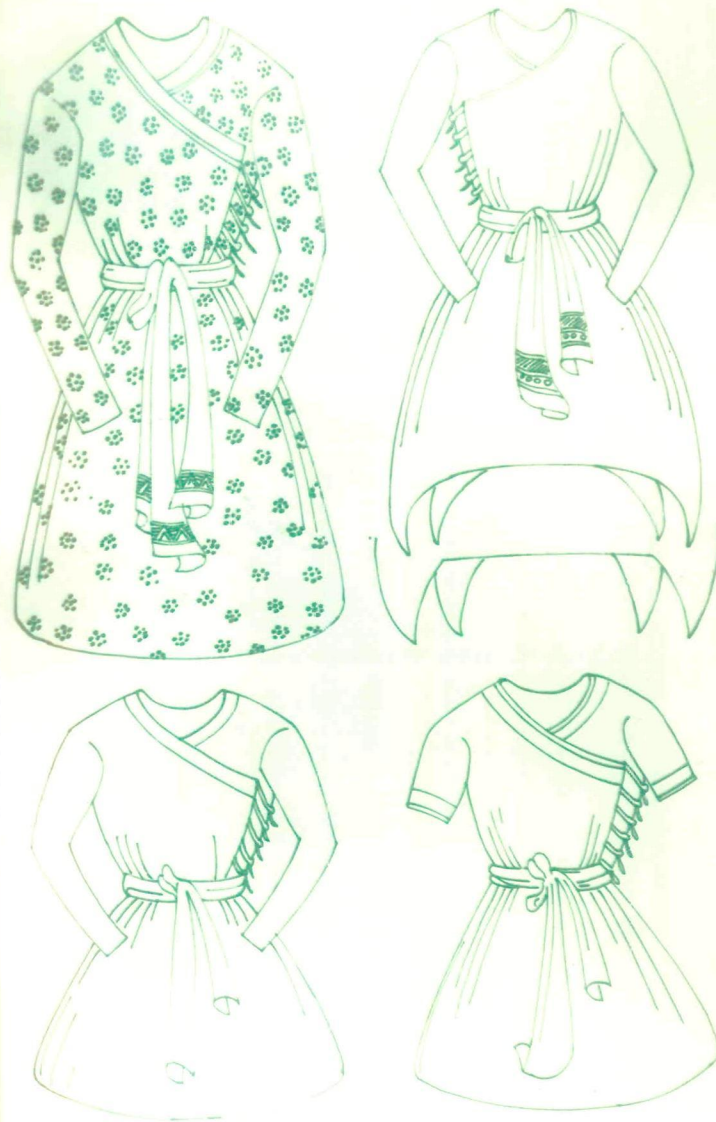


PLATE Lxxiv

of which must have been traditionally in use. Abul Fazl has also given a descriptive list of some other clothes with their Persian nomenclature. However the specifications given by him relate mainly to the nature of the material and the costs involved in their production rather than to their actual forms and uses. Blochmann has been misled in his interpretation of this inadequate description⁴ and has confused the nature and uses of some clothes. For instance there is no indication whatsoever of what Abul Fazl has called as dutahi, the shah-ajida and the sizani as being wearables. On the other hand the lines lends themselves to the interpretation that these were parts of the royal bedding or plain sheets to be wrapped⁵ about. These names have survived to this day without any alteration in their forms and uses.

Moreover the Ain enumerates only a few of the clothes - the need to be brief being the author's excuse for the omission. Any assessment such as this will therefore lack the basis of definitive means of identification. While using the Ain as the main source, our investigation will inevitably depend on pooling the resources of usages now current, dictionary definitions and common sense.

Jama

Of the four main outfits, the jama appears to be the commonest.

4. Ibid; p. 95.

5. Ain (Sir Sayyid Edition); p. 72.

It was the coat of the Mughal times and must have been worn over some sort of a shirt or half-shirt which however had no occasion to be depicted in the illustrations. It is generally tight fitting from the neck to the waist but was long enough to cover the body upto a ⁶ little above the ankles. As a matter of rule the Mughal dresses do not exhibit the use of a high or a turned collar. Instead they were cut round at the neck and the edges were sewed up. It has full tight sleeves. The front is double-breasted. The upper span crossed over the chest from left to right and was tied below the arm-pit with ⁷ laces. It was made from seven yards and seven girahs of cloth. ⁸ It appears that only special kinds of cloths were used for making a jama. The richer people decorated it with embroidery and gold thread work on the borders. The Katzeb which was a cloth-belt was invariably tied around the waist with a fine knot - the ends hanging to some length on a side. According to Abul Fazl Akbar ordered the jama ⁹ to be tied on the left side instead of right. In the illustrations however we met both of these kinds irrespective of any distinction of status. The term takauchiya seems to have existed in India from before. It appears to have been the name of the Indian coat resem-

6. Plate LXXIV, fig. 1.

7. Ibid.

8. "It requires seven yards and seven girahs, and five girahs for the binding". Ain (Bloch.), Vol. I, p. 94.

9. "Formerly it had slits in the skirt, and was tied on the left side; his Majesty has ordered it to be made with a round skirt and to be tied on the right side". Ibid.

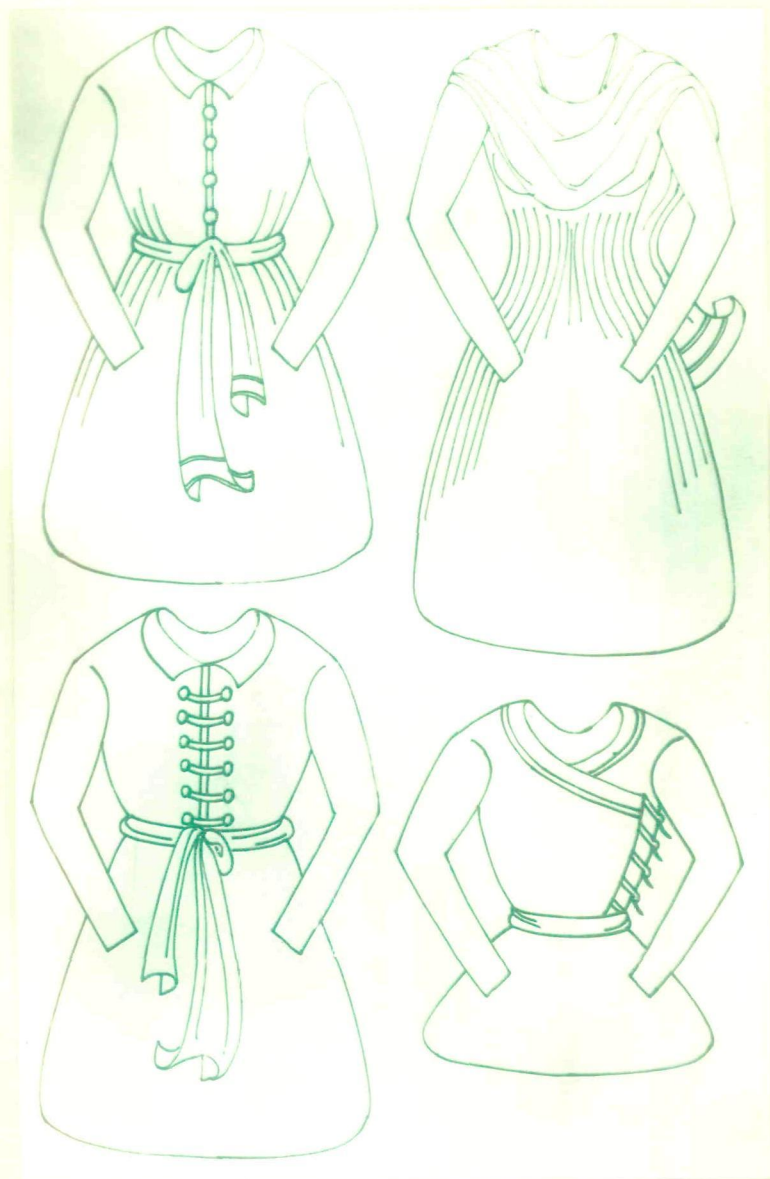


PLATE Lxxv

bling the jama but having four or six conical ends in the skirt.¹⁰
 With very slight variations the jama continued to remain as the
 main outfit of gentlemanly dress until very recent times. The
angarkha which seems to be a name of Awadhian origin is the final
 form that the jama acquired.

The Peshwaz

It is a long flowing robe covering the body upto the ankles. Abul
 Fazl describes it briefly as being like the jama but opening in the
¹¹ front. According to the lexicographers it is the special wear of¹²
 women which seems to be correct. The peshwaz is still used as the
 main costume of the female dancers of kathak style though it is
 possible that it may have undergone slight variation ever since. The
peshwaz could be made without neck and is tied somewhere on the
¹³ middle of the chest rather loosely. It has full tight sleeves. At
 times it could be made without strings.

The jama and the peshwaz were standard coats used without any over
 garment or gown. Moreover these were summer dresses. We have no
 evidence of a peshwaz or a jama being wadded. On the other hand
 they seem to have been made of very thin cloth probably muslins,

10. Plate LXXIV, figs. 2,3.

11. Ain (Bloch.), Vol. I; p. 94.

12. Duncan Forbes; p. 226(a).

13. Plate LXXV, fig. 3.

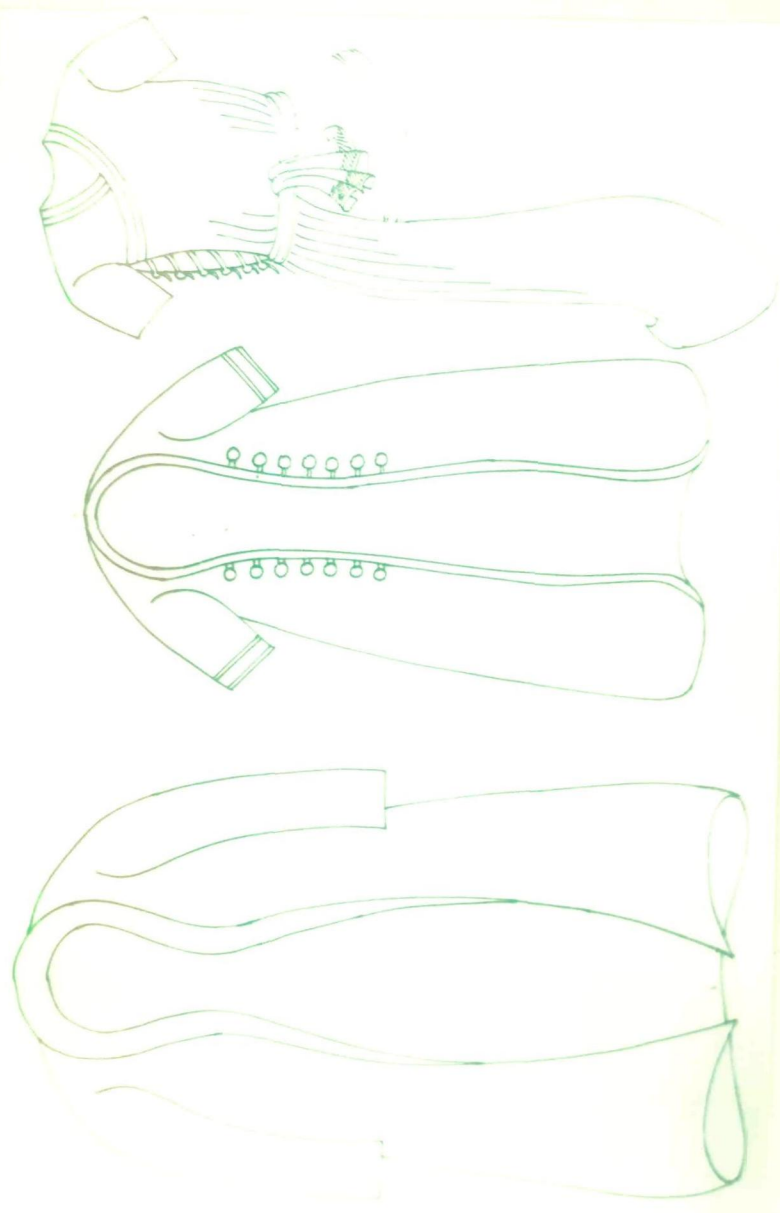


PLATE Lxxvi

treatment of animal figures - a tiger drawn in the centre and birds on either sides; rest of the composition remains Persian in style. The former proclaims the Mughal's originality and character. In the other instance the unit displays birds perched on the branches of plants. Their naturalistic representation affiliates the art with the Mughal Qalam. In the Shamyiana's borders, however geometrical designs are given preference to floral patterns. The borders being narrower are treated differently. Shamyiana's borders are bold than those of the carpets. The dominant colour in them is also the Persian blue. A few are painted in crimson red also.

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An original expansion in decoration may be seen on plate LXXXVI (Razm; Jaipore). A miniature composed of human figures in the foreground and landscape in the background is employed to decorate the space. The miniature is enclosed with several bands of lines surrounded with a broad margin of floral border. This miniature may itself be taken as a painting. The use of a ^a painting for the spot decoration seems the innovation of the artist. We have not ^{met} with such example elsewhere.

The tents generally go with the Shamyianas. These may be plain or decorated on the outside or both inside and outside. Generally tents

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18. This illustration is attributed in the name of the artists : Tara (Tarah) and Ramdas(amal). In the other works of these artists in this manuscript or elsewhere, such unique adjustment of a miniature in decoration is not seen. In the present example it may be taken as accidental.

are decorated with running patterns. Spot designs are rare. In the spot decoration - flowerpots full of bunches of flowers and leaves or a cypress tree embraced by another tree having five petalled¹⁹ flowers (ibid -D) could be drawn as units and repeated alternately. Composition of the latter unit is directly derived from the Chinese art. The ganats (curtain used as wall with the tents and Shamvianas) are also decorated with similar patterns.

Insignias, arms and armours decoration

Arms, armours and insignias are generally provided with decorative motifs. Among the insignias the Sayaban, royal umbrella and thrones^{are} embellished with floral designs of the type observed in the carpets. One comes across of varying forms of alam's head wherein motifs of²⁰ utensils, animal heads, dragons and human faces find out their way. Spot decoration occur very rarely. The alams are wrapped in the fine linen with prints resembling those of costumes.

The arms - sheaths, bow-cases, quivers and shields etc. - are also²¹ done in floral designs or the spot or running type as in the costumes.

19. Akb; f. 201 (C.B.).

20. Plate XCI.

21. Diwan; f. 147(bowcase) Rampur; Akb; ff. 187b(bow case), 188 (Shield), 226b(bow case) C.B. pls. 6(Shield), 10(Shield), 11(Shield), quiver), 18(shield), 25(shield, bow case), 31(shield, quivers), 41 (shield, bow case), 42(quivers), 47(shield), 63(bow case), 68(shield), 97(shield, bow case), 98(Shield, bowcase), 100(bowcase, shield), 103 (bowcase, shield), 108(bowcase, shield), 116 (Shield), V.A., Tarikh; ff. 6b(quiver and shield), 8b(bowcase), 11b(shield), 15a(bowcase), 24a(bowcase), 24b(bowcase), 28b(quiver and bowcase), 48b(shield), 55b(shield), 57b(shield), 65b(bowcase), 110b(shield bowcase), 147b (bowcase), 154b(shield) (Patna) Razm; pls. 53(shield), 54(shield), 56(shield), 60(shield), 82(shield), 108(bowcase), 117(shield), 136 (shield), 142(shield), 144(bowcase and shield) (Jaipore).

Freehand work is also met with casually on the shields but commonly on the armours. The designs are bolder, drawn in horizontal or vertical stripes, cheque patterns with nail-head spots, crosses, small circles or flowers on points of intersection or in the blank of squares.²²

Floor and wall decoration

Decorative designs on floors, wall, spandrels and pillars from a type which is quite distinct from other type of decorative patterns. A common motif is a hexagon repeated alternately with a star. It may be replaced by a pentagon or an equilateral triangle, or rarely a square,²³ in a variety of settings, breaking the monotony of similar units.

Sometimes the star is replaced by a flower, of course, in a stylised form and drawn in free-hand.²⁴ As a matter of rule free-hand drawings are not favoured for floor decoration and accuracy in repetitive patterns is considered necessary. Among the different combinations, composite units of hexagon and a six petalled flower drawn in geometrical form; star and a triangle; hexagon and a star are greatly favoured²⁵ (*ibid-C*).

22. Horse armour-design: *Diwan*; f.355(Rampur); *Akb*; ff.10b,18,187b,188, 226b,255(C.B.); pls.10,12,13,25,31,41,42,53,63,97,98,100,102,104, 107,109(V.A.); *Tarikh*; ff.7b,8b,10b,11b,15a,20b,23b,24a,26b,44b, 53b,57b,65b,170b,202a,226a,337b(Patna); *Razm*; pls.43,50,54,60,63, 69,90,93,96,99,104,108,110,111,113,144(Jaipore).

23. *Tuzuk*; pl.68(Moscow).

24. *Akb*; f.143b(C.B.); pls.9,20,78,112(V.A.). *Tarikh*; f.90a(Patna); *Razm*; pls.38,120,136(Jaipore).

25. *Diwan*; f.30(Rampur); *Akb*; f.143b(C.B.); pls.8,9,20,21,28,78,79,89(V.A.); *Tarikh*; ff.40b,134a,136b,143b,144b(Patna); *Razm*; pls. 10,11,14,37, 38,73,78,116,119,136(Jaipore).

Wall decoration is very similar to that of the floors. Pillars, domes and walls are decorated by simpler geometrical units such as circles, hexagons and triangles. Circles are usually divided in three equal parts or sectors through straight lines.

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For the decoration of domes geometrical or floral patterns - both are employed in over-all settings. The former is mostly preferred. There is at least one instance in which a deer, drawn in three dimensional form and violent action is adopted as the main motif. It has been set inside a running floral design and repeated in a circular sequence about the base of the dome. The floral decoration of the dome is reminiscent of the Persian Qalam. But the presence of the animal form is undoubtedly an original expansion which is not met with anywhere else (ibid -D).

The spandrels provide another ground for floral and geometrical patterns which are so conceived as to match with the designs given on the walls.

Costume's decoration

The richest variety of designs is found on the costumes, especially the jama , farji , patka , doshala and the turban. These are done

26. Akb; pl. 9, 32(V.A.); Tuzuk; f. 520a (B.M.); Tarikh; ff. 4b, 58b, 146b(Patna); Razm; pls. 13, 14, 17, 79, 84, 124, 125, 136 (Jaipore).

27. Tuzuk; f. 520a (B.M.).

entirely in free hand and bear both spot design and running pattern. Floral designs are however common than others, though the finest of them appear on the jamās. The patkas are decorated on both the ends. Generally a band is given on the lower edge and the same is repeated above to make two or such bands. In between these spaces are filled with small spot - or all-over designs. Occasionally the patkas are found decorated with chains of triangles. Turbans are generally displayed plain and sometimes decorated with parallel and cross stripes of lines or small motifs of flowers or dots, in spot and running settings. But it is in the shawls that the artists show an imaginative use of the spot patterns.

The saddle-cloth is a miniature carpet, so to say, and is ^{e l}_{l k}embellished with similar patterns in a much diminished size. Variety is however lacking here. The motifs used in one painting may be found repeated in several others. In one instance, the lower part of the saddle-cloth has the figure of an elephant and a lotus. As a matter of rule, geometrical designs are not favoured, though couple of the saddle-cloths have been left plain.

Designs of utensils

The decoration of the utensils shown in the paintings do not present as significant case for our study as the items which have been dealt

28. Ibid; f. 305; plate LXXI - D.

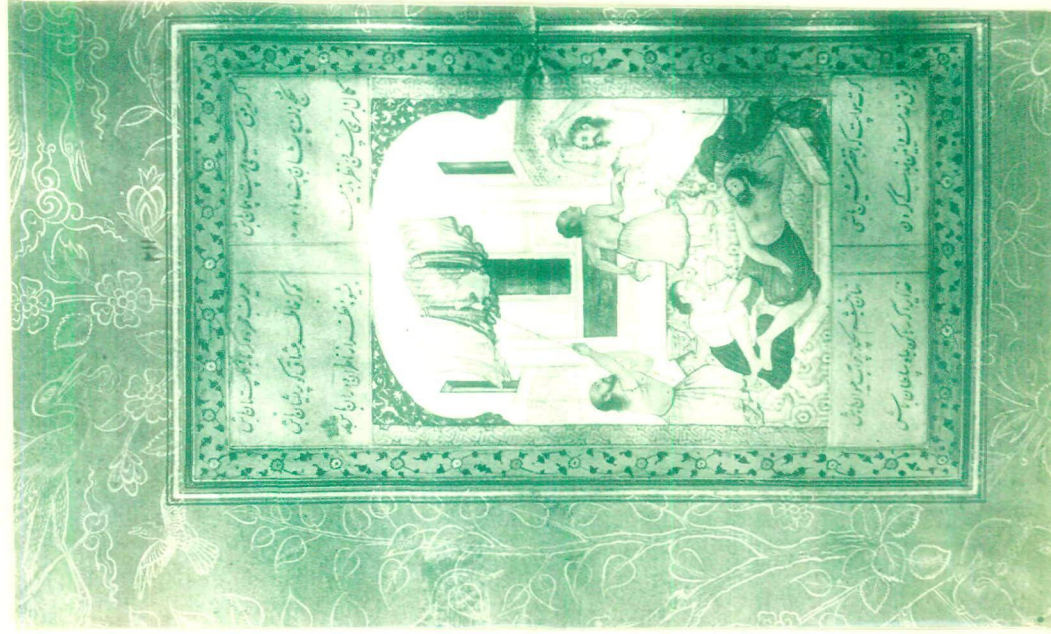


PLATE Lxxii



PLATE Lxxiii

with above. Utensils forms are comparatively less numerous and bear the conventional designs that we can still see today on earthenware like pitchers. The usual style is of horizontal bands or vertical lines starting right below the neck and curving downwards corresponding to the form of the utensil. The former are special to lids, bowls, dishes and serving pots. In between the horizontal bands, often drawn in parallel pairs the spaces are filled further by zig-zag lines, as though, in symbolic expression of water.

Border-design

Border (hashyia) is a secondary part of the taswir. Nevertheless the Mughal artist regard it as a necessary element, the reasons for which may well be understood. Its primary function was to regularise the outlines or margins of the paintings, or to give it an artistic finish. Here the artist enjoyed considerable liberty and within the narrow stripes of the hashyia he tried to display all that he could prefer in order to provide the painting with additional decore. He could choose contrasting motifs or colours to emphasise the main theme or to enhance its aesthetic appeal by rendering it in matching colours and objects such as creepers, leaves, flowers, design of various types. It certainly helped to create an effect of wholesomeness on the viewer's eye and a feeling of rhythm. Finally the practice reflects the fondness of the medieval painter and his patron for ornamentation.

Hashyia decoration was entirely the work of different painters who

specialised themselves in design. When the taswir was finished, it was handed over to the wasligar who mounted it and then passed on to the jadval arayan (line-drawer). Several line-drawers were employed²⁹ in the Mughal atelier of paintings.

Borders are simple. The illustrations are enclosed by additional narrow bands of lines mainly in black, deep green, blue, white and gold pigments. These may be four to eight or even more in number, running parallel to the corresponding hashya. Lines are drawn with accurate measurement of length and breadth. A very narrow space is left in between two lines which is sometimes painted with gold pigment. In other case when the space is left a little broad, is decorated with floral designs.³⁰ Contrast and deep pigments are preferred.

Border decoration in the illustrations of the manuscripts Diwan-i-Hafiz (Rampur) and Tuzuk (B.M.) make a class by itself. These display flowers, buds and leaves employed in the running settings. In most case three or four petalled flowers are drawn on a measured distance. These are linked with one another with creeping stems and leaves. Both the stylised or natural forms of flowers, buds and leaves are equally favoured by the painters. The spot setting of these motives

29. "In the same manner, as painters are encouraged, employment is held out to ornamental artists, gilders, line drawers and pagers". Ain; Vol. I, p. 115.

30. Diwan; ff. 19, 20, 30, 74, 116, 147, 177, 211, 247, 284, 314, 355 (Rampur).

is also the subject of a few borders. In the latter manuscript the side of the border facing the binding is sometimes wider than the other sides. The other sides are also of unequal width. It is difficult to understand the reason for the adoption of this method. P. Brown has described that this system is derived from Persian book-³¹ illustrations. Certainly, however, it relieves the monotony which would be created by an uniform borderline. The unequal proportions of designs appearing on different sides and likewise the variations found in the motifs seem to be conditioned by the uneven width of the border itself.

Besides the border, margins of the illustrations in the Diwan-i-Hafiz (Rampur & C.B.) are decorated in a variety of conventional, floral designs, stencilled in gold. Floral motifs are directly drawn from the nature with inner details in line - drawing. The stylised form of a lotus with elongated petals, a flower with five or seven petals and curvilinear leaves and stems are quite common and severely
³² repeated. ³³ Occasionally the figure of an elephant, or tiger and fox, ³⁴ or a tiger with the characteristics of a Chinese dragon-flame like

31. "It will be noticed that many miniatures are not in the centre of the mount but slightly to one side, a custom derived from the Persian book-illustrations, which, being bound in a book were placed in this position. Many Mughal pictures were intended to be bound in Muraqqa, a kind of album or scrap-book, so that they were also mounted on one side by the Vasligar with this object in view". P. Brown (M), p. 191.

32. Diwan; ff. 19, 30, 74, 116, 147, 211, 284, 355 (Rampur).

33. Ibid; f. 147, 211.

34. Ibid; ff. 247, 314.

35

lines emerging from the body. Such decorated margins are also sparingly used in the manuscript to embellish the folios of text. Similarly, in the other copy of the Diwan-i-Hafiz - in the collection of Sir Chester Beatty Collection, folio one and two display stencilled floral design - depicting a human head emerging from blue-petals and enclosed in a circular golden-sun with wavy rays. These margins are the only examples employed to decorate the illustrated manuscripts under Akbar (plate LXXII & LXXIII).

36

In the illustrations belonging to the manuscripts Akbarnama (V.A., C.B.); Razmnama (Jaipore; Baroda); Tarikh-i-Alfi (Patna) and Anwar-i-Suhaili (Varanasi), decorative hashvias with motifs of natural objects have totally disappeared only the border lines remain. The illustrations of the Tuzuk (Moscow) manuscript are all made in flash-cut. These have neither the hashvia not the khat or the bands of lines. This is rather interesting, though its significance is difficult to ascertain.

37

35. Ibid; f. 177.

36. Appendix.3.

37. The hashvia, whether composed with decorative motifs or with or with lines only or of both was called jadwal. A hashvia made of lines only was given the term khat. P.Brown(M); p. 191.

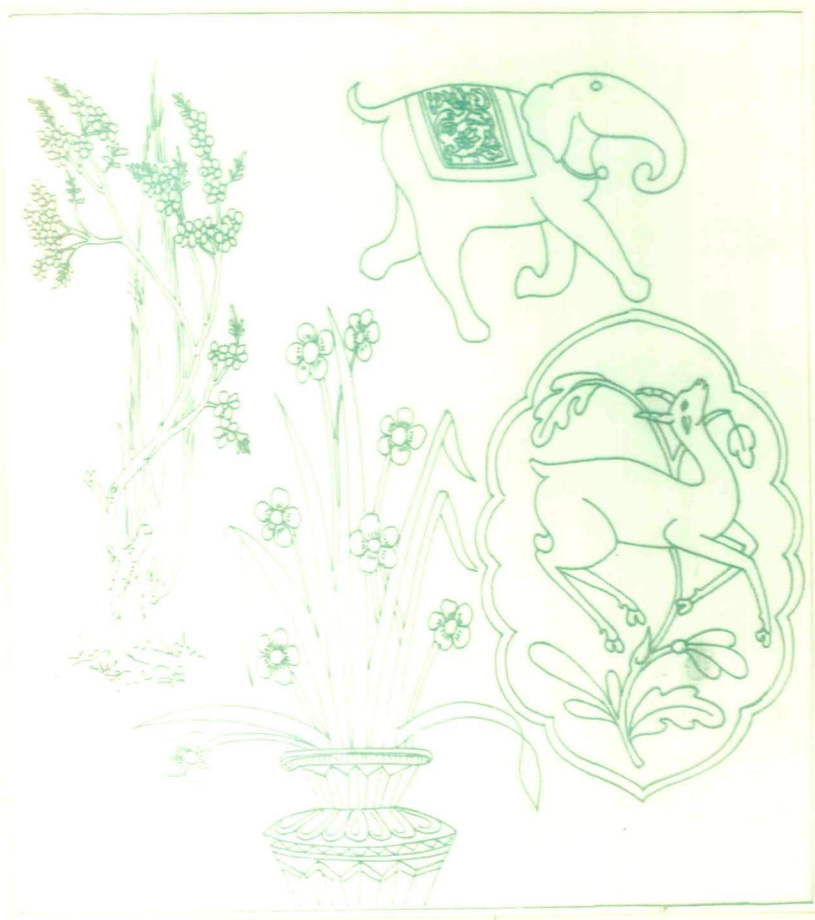


PLATE Lxxi (D)

Chinese and Indian influences can be categorically marked both in style and form. However the Mughal painters were not only imitators or adopters of the existing ideas. On the contrary their treatment of the animals was a great improvement on them. They replaced stylisation by realism and idealism by accuracy. They were endowed with great power of observation and matched it with equal skill. To connect this development with the Western or Chinese traditions would be stretching the argument a bit too along. None of these show so complete mastery as do the Mughal painters. The Chinese were adept in the representation of birds; Western artists achieved a single success in the depiction of domestic animals. For the Mughal painter the difference did not exist for he could capture their forms with equal perfection. In their representation the accuracy in form, sensible touch of varying moods and emotions, principles of maximum visibility of details, use of natural colours in their forms, the balanced landscape and delicate colour scheme - evidence not only the mastery of style and technique but also a commandable observation and appreciation of animal life.

DECORATION

It is an inalienable part of pictorial art and has fascinated the imagination of all kinds of artists who have used it as a complementary medium of decoration. The Mughal artists achieved a remarkable

degree of expertise in the utilisation of design patterns of an endless variety on costumes, ornaments, jewellery, utensils, furniture and buildings.

In the illustrations the designs appear in different settings and forms, for instance geometrical and ornamental patterns and stylised version of natural objects.¹ A strong propensity for conventionalisation of expression wherein the artist can rely on a few formula made up of standard curves and lines appears to be apparent cause of it. The stylisation of natural objects in design has been characteristic to the Persian Qalam. The motifs: five petalled flower with two stems on either ends; lotus with elongated petals interlaced with curvilinear leaves in onion shaped units are quite common. Geometrical designing is based on the repetition of such units as triangle, square, rectangle, line and half circles.² The hexagon however is the most represented element in the designs. These are employed to decorate the borders of Shamyianas, Chardiwaris of camps, floors and walls.

Costumes designs display considerable variety of settings and units.

1. Plate LXXI.

2. Diwan; ff. 19,30,211(Rampur); Akb; pls. 8,11,20,21,27,28,32,37, 50,78,79,88,89,96,113,117 (V.A.); ff. 27b,54,143b (C.B.); Tuzuk, pls. 1,3,10,23 (Moscow); ff.2,13,23,44,80,208,252,294,468(B.M.); Tarikh; ff. 4b,5b,6b,40b,110b,134a,136b,143b,144b,146b,260b (Patna). Razm; pls. 10,11,12,14,21,37,38,67,70,78,79,84,85,105, 116,119,120,136,138 (Jaipore).

All the three kinds of design (*Viz.* all over design, spot design and border design) are used. The patka, doshala and carpet etc. usually provide the ground for border designs. The most significant borders are those painted on the hashvias of taswirs. These borders are mostly decorated with designs in ornamented and conventional curves and lines. All-over and spot designs are found on carpets, garments shamyianas, floors, utensils, arms and armours etc. Traces of the Persian conventional form are evident in such designs as are developed by employing oval and onion shaped units; while designs composed of vertical and horizontal stripes are of typically pre-Mughal Indian Character. A wider range of units is displayed in decorative motifs which include representations of a variety of flower, leaves, buds. Motifs of birds and animals and utensils etc. are rarely depicted. The animal figures : a tiger, an elephant, a deer and birds find their way in the decoration of a Shamyiana, a saddle-cloth and a dome respectively (plate LXXI - D).

Walls also find a significant place as ground for decorative designing partially covered at the base leaving about two thirds of the upper part vacant. An interesting feature is the use of the utensil forms

3. Plate Lxxi - B.

4. Tuzuk; f. 252 (B.M.).

5. Akb; f. 1 (C.B.); Tuzuk; f. 305 (B.M.); Ibid; f. 520; Tarikh; f. 89b (Patna).

6. Diwan; f. 19,30,211(Rampur); Akb; ff. 54,147b,148,168b,245(C.B.); pls. 8,21,50,78,79(V.A.); Tuzuk; pls. 10,23,68 (Moscow); ff. 2, 252,256,260,279,294 (B.M.); Tarikh; ff. 5b,40b,134a,254a,260b (Patna); Razm; pls. 10,12,14,84,119,136,138 (Jaipore).

for wall decoration pronouncing the Central-Asian affiliation of
 the art of Akbar's court.⁷

The decorative art of the illustrations present a crisscross of different traditions. The affinities are sometimes clear as in the use of elephant figures as units of linear or spot decoration or of the realistic shape of the lotus flower, both of which are reminiscent of the pre-Mughal Indian proclivities.⁸ In other instances the adoptions are fused with alien elements as when lotus has been stylised. The motifs of a dragon head, birds with elongated beaks and furious expression employed in the decoration of alams, awrangs and boats⁹ are close to the Chinese tradition.

In respect of decorative art and fertility of imagination the Akb. (V.A. & C.B.); Tuzuk. (B.M.); Razm. (Jaipore) and Tarikh. (Patna) are certainly the richest. The profusion of design appearing on all kinds of articles - costumes, chhatras, sayabans, awrangs, floors, walls, columns, utensils, even the nooks and corners having seemingly no significant place in the over-all view of painting - is a treat to the eye. Anwar (Varanasi); Diwan (Rampur) and Tuzuk (Delhi) though not so overdone are nevertheless rich in decore. The Razm

7. Tuzuk; f. 252 (B.M.).

8. Ibid; f. 305.

9. Plate XCI figs. 16-20; Plate CXII; figs. 10-12.

(Baroda) and Tuzuk (Moscow) are comparatively auster. Evidently the latter originate in a different technique. These are conspicuous for their wet surface tonality and economy of lines. The concept of detailing minute patterns, and careful shading by measured lines which is characteristic of the Mughal art is replaced here by bold treatment of colours and lines, a technique which is less imitable to profuse, detailed design work.

CARPET DECORATION :

In the illustrations carpets are shown being for seating the main characters. These display various decorative designs which are drawn with the repetition of floral and geometrical motifs either all over the ground¹⁰ as is generally observed or in spots. Animal and bird forms are not used. Floral motifs are drawn from such natural objects as flowers, buds and curvilinear leaves (plate IXXII- B). Stylised form of the lotus and the onion shaped curves are quite common and seem to be close to the Persian Qalam. Horizontal and vertical¹¹ stripes are observed very rarely. Plain carpets are very rare. With¹²

10. Diwan; ff. 19,30,116,247,314 (Rampur); Akb; ff. 1,6b,27b,147b, 168b,201,245,263b (C.B.); pls. 8,9,27,32,50,52,75,79,86,88,94, 96,112,113,114 (V.A.); Tarikh; ff. 4b,5b,40b,45a,72a,89b,90a, 104a,118a,123b,126b,131b,132a,136b,140b,140b,144b,166b,178b,182a, 205b,206b,154a,260b,328b (Patna). Razm; pls. 2,6,10,12,21,37,39, 68,73,79,85,86,136,138 (Jaipore).

11. Tuzuk; f. 252 (B.M.).

12. Ibid; pl. 33 (Moscow); Tarikh; ff. 20a, 146b (Patna).

slight variations, floral designs are more or less similar in pattern and drawing. The basic concept which is repeated again and again is of a blue carpet with a yellow border. The palmettes and interlacing scroll work form the basic patterns of the ground. This is true not only about the miniatures of one manuscripts but the designs found in all the manuscripts are not substantially at variations. Instances of spot decoration are rare.

Border is mostly composed of a continuous running pattern of a flower - four or five petalled, emanating with two stems on either sides. For border decoration floral designs seem to find more favour with the artists than geometrical patterns. The latter comprise simpler forms such as triangles, squares, half-circles and lines (*Ibid* - C). Distinction between the patterns in the centre and the margins is made by means of variation both in motifs and colours. The Persian blue is pre-dominant.

Some of the carpets preserved in the museums as those used by Akbar

13. *Diwan*; ff. 30,314 (Rampur); *Akb*; ff. 1,6b,27b,54,168b,201,263b (C.B.); pls. 9,20,27,32,78,79,86,88,96,112(V.A.); *Tarikh*; ff.4b,5b,20a,45a,72a,89b,90a,123b,126b,131b,132a,140b,144b,166b,178b,206b,254a(Patna); *Razm*; pls. 2,6,12,21,37,68,79,86,136,138 (Jaipore).
14. *Diwan*; f. 19,247(Rampur); *Akb*; pl.50,52,94,113,114(V.A.); *Tarikh*; ff. 40b,104a,136b,328b (Patna). *Razm*; pl.10 (Jaipore).
15. Plate LXVIII: Fragment of an animal carpet. About 4 by 3½ feet (1.0065 by 1.29 m.) Third quarter of 16th century; The Textile Museum, Washington, D.C.; Plate LXIX : A landscape carpet, 7 feet 11½ inches by 5 feet 1 inch(2.227 by 1.750 m.),Late sixteenth century; Museum of Fine Arts, Boston.(The patterns and basic concept of design are Persian. The space is filled with beasts,

Contd

display remarkable degree of originality. Figure of animals, geometrical-patterns, utensils -motifs, architectural-designs, animal fights, hunting scenes, the Chinese dragon, mythical objects and a variety of floral running designs, all are made use of in amazing combinations and colours. This contrast is intriguing. Though the question whether the painters were simply repeating the carpet design for the lack of imagination or a matter of convenience, is a matter of conjecture.

Shamyiana and tent decoration

Shamyianas may be decorated with floral or geometrical designs or may
16

left plain, though rarely. No particular care is taken to distinct in the decorative designs of the Shamyianas and carpets. Like the latter, the former may be done in over-all or spot patterns and in similar colourscheme and units. Atleast in two instances bird and
17
animal - motifs are employed for decoration. Wherein besides the

Contd...15. mythical objects, buildings, trees and flora devices, In the latter example, the composite animal shown in the lower margin of the carpet is unique. The figure is the combination of various animals. Its thin waist, upright long tail and legs seems borrowed from the lion motif. The neck stiff like a swan and upright ears are apparently borrowed from the horse. The mouth with tusk and trunk is of an elephant. Wings are also shown on either sides. Thus the figure is composed of a horse, an elephant, a lion and a bird. This mighty fabulous animal is shown fighting 7 elephants and a huge bird.) A very similar composite animals are employed as motifs in the decoration of Delhi gate of Agra fort. (Depiction of Fabulous Animals (Gaj Vyala) at the Delhi gate of Agra fort; by Dr.R.Nath; Medieval India a miscellany, Vol.II, pp.45-52; 1972.).

16. Akb; ff. 54, 147b (C.B.); pl. 79, 112 (V.A.); Tuzuk; ff. 208, 293 (B.M.); pls. 6, 29 (Moscow); Tarikh; ff. 20a, 123b, 136b (Patna); Razm; pl. 119 (Jaipore).

17. Akb; f. 1 (C.B.); Tarikh; f. 89b (Patna).



PLATE Lxvi



PLATE Lxvii

by him in a diagonal composition depicting violent force can be compared with the work of Basawan executed on plate 22 in the same manuscript (plate XXXII). In the present example Banwari Kalan has joined him in work. His independent work lies in the Anwar-i-Suhaili manuscript²⁰ (Varanasi). He balances the composition by introducing animal figures and prefers harmonious colour-blending. Objects are filled up with thin colour (plate L xiv).²¹ Shankar gujrati and Bhavani can well be trusted for fineness and accuracy in lines. To express the mood of tension and fearosity in the combat of animals, is the skill of the latter (plate xxvii). The former has shown his excellency in the vivid portrayal of the animals. The landscape blended in the thin-wash of colour and harmonious colour scheme, simplicity in form and rhythmic lines characterise his work (plates LXV & LXVI).²²

Sarvan prefers to build-up the whole picture mainly in blue and green colours occasionally mixed up with the tinge of yellow.²³ In a few of his works the background has subdued the main objects. The representation of a wild Indian buffallo in the Tuzuk (B.M.), may be taken as his best work.²⁴ Strongly built body of the animal, drawn in a few

20. Anwar; ff. 48, 71 (Varanasi).

21. Tuzuk; pls. 78-80, 85 (B.M.); Anwar; f. 144 by Shankar (probably the same - Shankar Gujrati), Varanasi).

22. Tuzuk; pls. 94, 107 (Delhi); pl. 113 (B.M.).

23. Tuzuk; pls. 59, 83, 84 (B.M.); Akb; pl. 18 (V.A.).

24. Ibid; pl. 59.



PLATE Lxviii



PLATE Lxix (A)

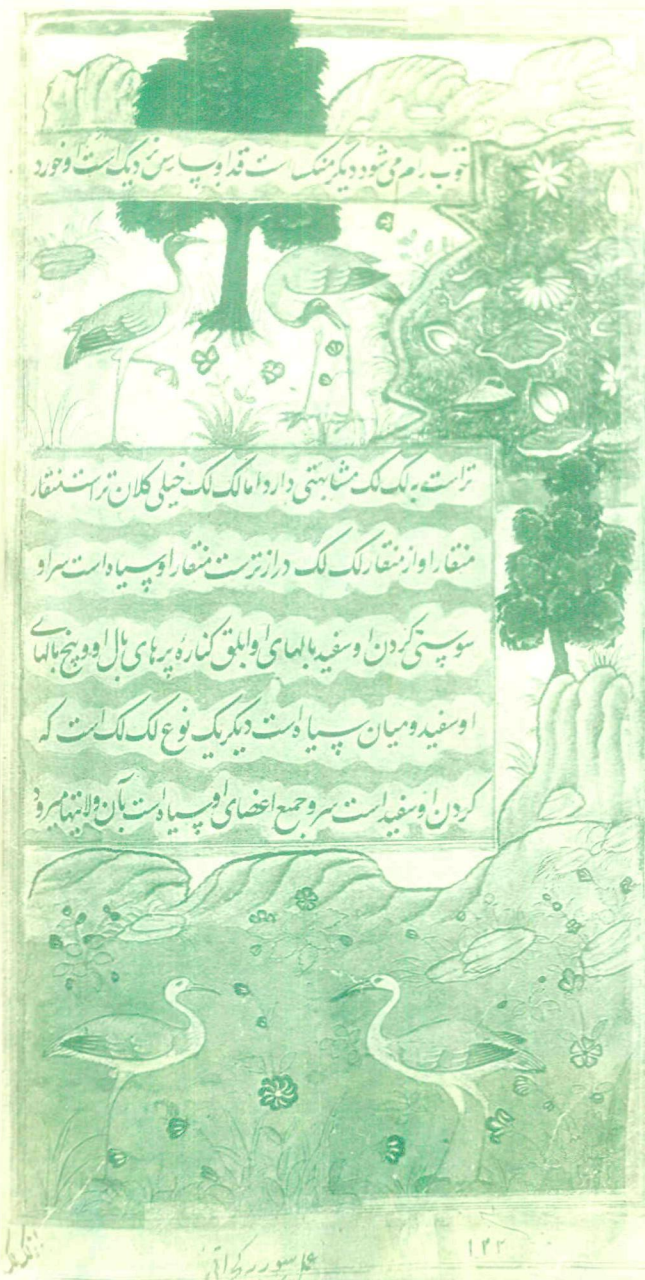


PLATE Lxix (B)



PLATE Lxx

lines with the suggestion of the curvatures of body, has emerged in the light background of yellow and blue (plate LXVII). He seems to prefer the drawing of a single figure in the whole composition (plate LXVIII).

²⁵
Surya Gujrati has rendered details in bold lines and has preferred ²⁶
to draw birds always in pair (plate LXIX). Dhanno and Hussain ²⁷
Naqqash have equally preferred the birds and painted them in the lap of nature in the wash of thin colours. The former has much emphasized ²⁸
on the landscape (plate LXX). Mahesh is known for his illustrations in the Akb; (V.A.), Tuzuk (Delhi) and Anwar (Varanasi). The painting depicting 'the capture of a wild elephant' seems best of his works. Diagonal composition has produced the rhythm in the picture. In the ²⁹
present example Kesu Khurd has assisted him as a side artist (plate XXIV).

³⁰
Hunting scenes are the reproduction of the vivid observation of artists. Various species of animals are crammed in one scene (plate XX). In these group drawings also each figure has been treated individually and finished on separate planes. The figures drawn in

25. Ibid; pl. 76,77.

26. Ibid; pl. 68,75, 82.

27. Ibid; pl. 69.

28. Akb; pl. 40(V.A.); Tuzuk, pl. 91 (Delhi); Anwar; f. 55 (Varanasi).

29. Akb; pl. 40 (V.A.).

30. Tuzuk, pls. 63,64,74,80,81 (Delhi); pls. 42,43,47,53-55(B.M.); pls. 25,26(Moscow); Akb. f. 155b (C.B.); pls. 17,18,24,84,92, 93 (V.A.); Anwar, f. 17 (Varanasi).

their natural lay out depicting variety of postures and the rhythmic lines expressing different moods evidence the skill of painters. Of them Basawan (plate XIX & XXII), Dhanraj, Jagannath, Lal (plate XXIII), Manohar (plate XX A) and Paras have surpassed others in the composition and balance of landscape. Farrukh ³¹ chela ³² may be noted for the illustration of animals in the theme taken from tales and fables (plate iv and vii A).

Although ³³ Manohar has not been included in the list of Court-painters furnished by Abul Fazl, attained the fame for his animal studies. His illustrations are the treasure of modes of expression. In all of these every possible detail is precisely rendered, quality of draughtmanship is exceptional and the colours are vivid and brilliant. However we come across only two illustrations - a hunting scene and 'a princess on death bead' attributed in his name; under the collection taken for study ³⁴ (plate XXa & XXX).

One come across of various trends in the representation of animal figures. The elephants are drawn in the pre-Mughal Indian style wherein the trunk is always shown curled and the whole drawing is imbued with solid three - dimensional effect. The treatment of horse, camel, deer and dog is nearer the Persian style. These have

31. Basawan (Akb; pls. 17, 18, 24 (V.A.). Dhanraj (Tuzuk; f. 305 (B.M.); Jagannath (Ibid; f. 352); Manohar (Ibid; f. 283); Paras (Ibid; f. 347); Lal (Akb; pls. 92, 93 (V.A.).

32. Anwar; f. 30 (Varanasi).

33. Encyclopedia of World Art; Vol. IX, p. 499.

34. Tuzuk; f. 283 (B.M.); Anwar; f. 100 (Varanasi).

been rarely depicted in pre-Mughal Indian painting with the exception of deer, which too has become stylistic or idealised. In the Persian and Mughal styles the deer does in no instance lose its realistic form. The treatment of the horse reflects the Persian conception of the ideal qualities of the animal: Small face, fleshy, heavy body, thin, strong forelegs and long tail. The representation of this animal appears alike everywhere in the illustrations.

The fish which are shown either straight or half-curved, and more often than not, half submerged in the water. This treatment has its origin in the pre-Mughal Indian art.

Traces of Chinese art are also not wanting in the miniatures drawn from animal life. Interestingly, the Chinese dragon has found its way in the form of the crocodile³⁵ which is provided with all the attributes and features of its imaginary counterpart, namely ears, gigantic claws, flame like linings originating below the lower jaw and running along the neck down to the chest (plate LXVIII).

Animal painting has acquired a special significance in the Akbari art. The portraiture of animals and their free movements represent a fascinating subject for the study of influences. The Iranian,

35. Ibid; pls. 83, 84, 114 (B.M.); pl. 111 (Delhi); pl. 45 (Moscow).



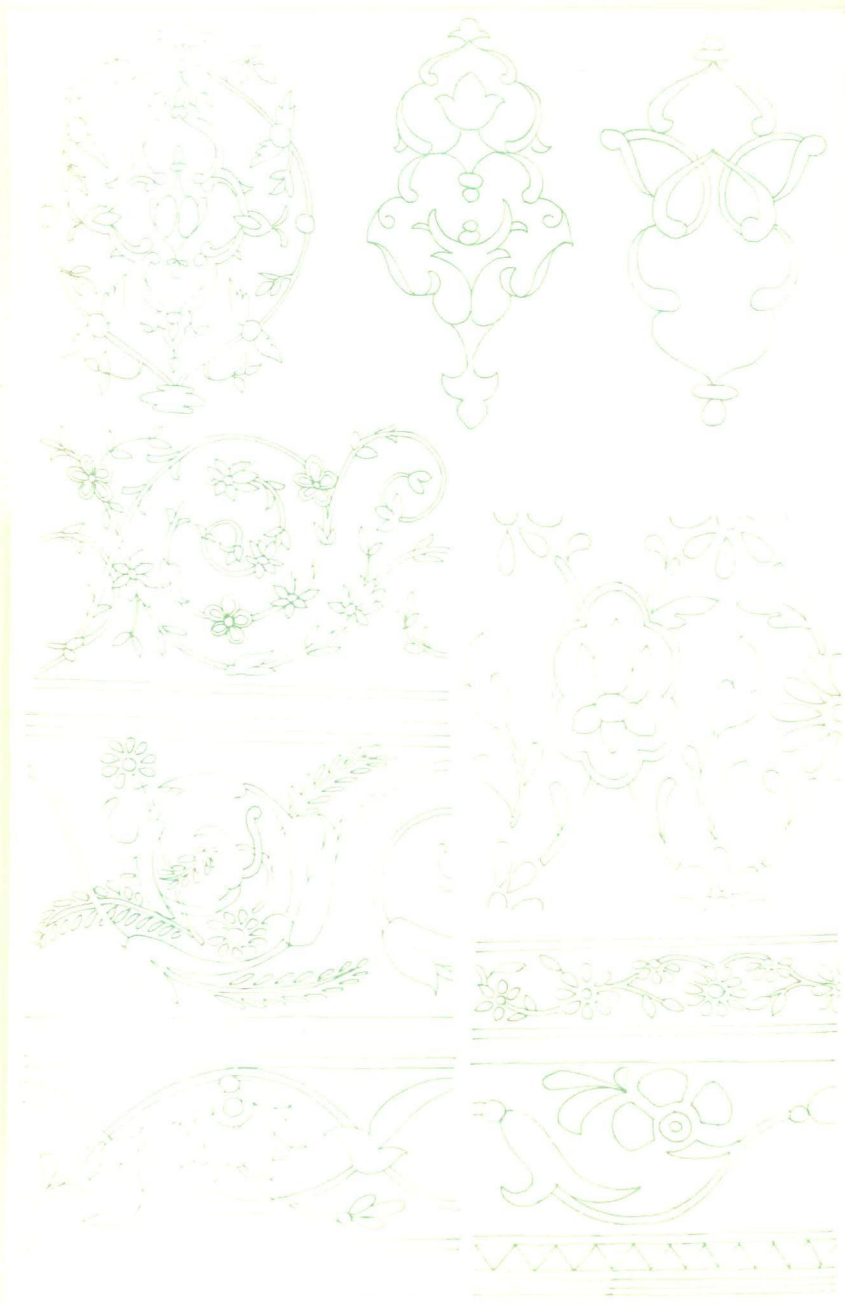


PLATE Lxxi (B)

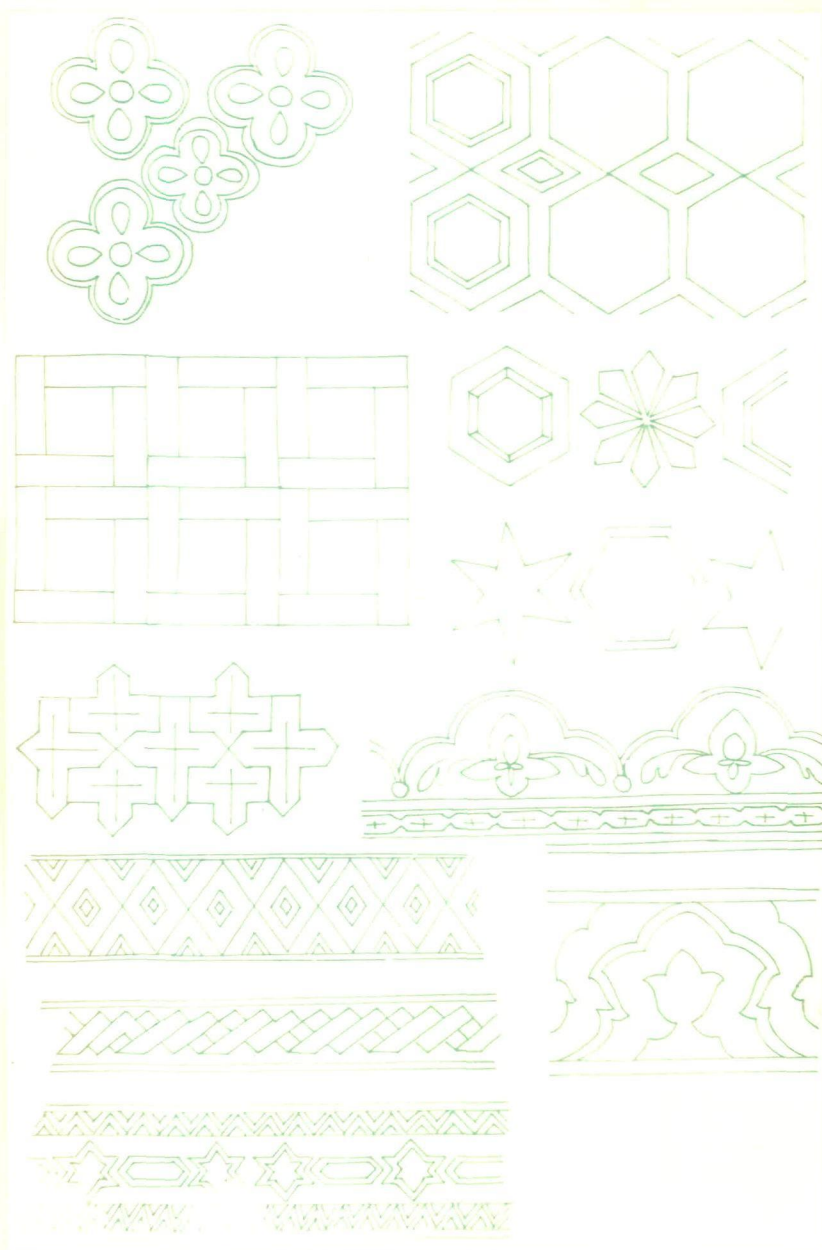


PLATE Lxxi (c)

Human figures represented in the illustrations can be divided into several categories. These are the common people, the noble, king and his near relations and ladies. The difference is expressed by means of external characteristics like costumes, positioning of figures and functions etc. As a rule the common man is drawn as a type, having no individual identity. The face, hands, bulk and stature remain more or less the same everywhere. Distinction among them is however sought to be made by different dress. A personal attendant of a noble and a shepherd or a sailor acquire their identities through the omission of a head gear or simplicity of the garment or by showing the body half-naked. A further mark of distinction is the work shown as being performed by a figure.

The only instance where the artist is bound to maintain the individuality of the subject is the person of the king, his near male relations and some of the courtiers. In this the artist depends on some standard lines, positioning of the figure, costumes, ornaments and the lay out. It is learnt that the face drawing of Akbar is not entirely identical everywhere. His profile or three quarter view both

9. Akb; ff. 25, 147b, 157b, 201, 245 (C.B.); pls. 15, 20, 27, 54, 65, 81, 83, 85, 93 (V.A.); Tarikh; f. 331a (Patna).

10. Akb; ff. 25, 32b, 122b, 157b, 248 (C.B.); pls. 9, 17, 21, 22, 23, 40, 52, 54, 67, 75, 77, 92, 93, 97, 99, 106 (V.A.). Tarikh; ff. 322a, 323a, 331a (Patna).

11. Akb; ff. 1, 6b, 19, 27b, 49b, 54, 147b, 169, 201, 295, 263b (C.B.); pls. 14, 15, 20, 24, 27, 39, 41, 50, 56, 60, 61, 65, 79, 81, 83, 84, 85, 94, 110, 113, 114, 117 (V.A.); Diwan; f. 19 (Rampur).

have attracted the artists but the latter has fascinated the most.¹²
 In the Tuzuk illustrations, in the drawing of Babur's face artist is assisted a few set lines - an oval face with a small pointed beard, ornamented costumes and by the prominence of place assigned to him in the lay out. Babur's face is also not entirely identical in many¹³ examples. His figure is also portrayed in three-quarter view and the¹⁴ strict profile is rarely found.¹⁵ The main figures: an emperor, a¹⁶ prince or a general; are usually drawn in three quarter view.

Slight variations in the shade of flesh colour is shown in a single personality. Akbar's face has been treated in varying shades by¹⁷ different artists. The same is true of Babur's face in the Tuzuk paintings, wherein, in several example he is shown to be of dark

12. Ibid

13. Tuzuk; pls. 2,8,10,16,18,19,21,24,33,68,69 (Moscow).

14. Tuzuk; ff. 83,84,94,123,133,180,181,274,295,306,347,468,478(B.M.); pls. 16,8,10,11,14,15,16,17,19,20,23,26,29,32,33,35,65,69(Moscow); Tarikh; ff. 246b,248a,252a,253a,254a(Patna).

15. Tuzuk; f. 468 (B.M.).

16. Diwan; ff. 19,74,116,147,177,247,314(Rampur); Tarikh; ff.4b,5b,6b,9a,10b,12a,14a,20a,219,23b,24b,26b,28b,32a,40b,42b,45a,48b,51a,54,55,57b,59b,60b,61b,63b,67b,72a,73a,89b,90a,104a,108b,118a,123b,126b,131b,134a,136b,144b,147b,148a,154b,166b,170b,178b,182a,194a,196b,205b,206b,226a,227b,230a,238a,246b,248a,252a,253a,254a,260b,284a,323a,328b (Patna); see also F.N. 11 and 14.

17. Akb; 122b,176b,248,263b(C.B.); Akbar's face is painted pink; or pink with a tinge of brown; or pink with a tinge of yellow; or pink in dull shade. (The originals of Akbarnama(V.A. and C.B. Collections), could not be accessible to us; therefore the study has been based on the coloured reproduction produced in the modern works); Akbar's face represented in the Tarikh-i-Alfi (Patna) on folios: 322a, 323a and 331a has varied in tone of colour.

18
completion. Difference is certainly not the reason for this inconsistency as, and it is important, a single artist is likely to render the features in different ways and colours. To ascribe this irregularity to lack of skill would be certainly wrong. The fact that the exception of lines standardised for consistently bringing out the identity requires no more than elementary knowledge of art and the minimum of expertise, as well as the frequency with which the darkish or fair tones are repeated stand proof so the renderings being deliberate. Evidently, the importance was attached to the accuracy in the representation of the contours of the face and the facial colour was not the artist's mainstay in the way of creating a required identity. Hence outer semblance was not the aim of an artist, who expertised in

-
18. Tuzuk; pl. 17 (Moscow); ff. 35, 128, 256, 305, 459, 478 (B.M.); Folio 205 (Delhi) published in the Mughal Miniature by Dr. Rai Krishna Das; pl. 2. — Dr. Rai Krishna Das is inclined to believe that Babur had slightly dark complexion. His conclusion is partially based on folio 205 of the Delhi manuscript which has been reproduced in his book, Mughal Miniatures and on some other paintings not specified by him. The darkish complexion shown in these paintings cannot however been taken as sufficient evidence. In fact the colour in these portraits is too dark to belong to a prince whose father and mother were of Timurid descent and of a pure race. Contrarily, in the majority of paintings Babur's face is depicted in pink. Even in the works of a single artist his face has been differently coloured. Notes characterising Babur are abundant in contemporary accounts, but Dr. Das' suggestion is nowhere corroborated.

The reason for these depictions however is difficult to find. Perhaps it should be ascribed to the painter's caprice. It is significant that all the paintings showing Babur's complexion as dark are Hindu artists (with the slightly exception of Khizā Chela). Might not this be taken as an evidence of the possibility that in so painting the emperor, they were tending to idealise the colour in the native Indian fashion where the Gods, especially Krishna and Rama are depicted in dark tones.

the depiction of innermost feelings and mood which is not wanting in his works. The high personage and authoritative character of the emperor is maintained everywhere. In his depiction, the artist is helped also by the configuration of objects, costuming of figures and the like. The main figure remains isolated tending to easy discrimination despite a freer stroke here or a slip there.

Artists seem to pay much care to face drawing; the rest of the parts of the body are considered of secondary importance. Most of the faces of the figures are drawn on more or less similar lines and the artist distinguishes them by varying the proportions of the various parts of it, such as nose, chin, lips etc. The face is oval or round or sometimes pointed at chin. Small round chin when drawn with large cheeks in a round face has produced a fleshy and heavy head.¹⁹ Shade-lines are employed in dark-tones round the chin, sockets of the eyes, nostrils and ears in order to create three-dimensional effect in the face. The remaining part of the face which is meant to be lightened is drawn in flat colour (plate LV).

The eye-brow is drawn in a curve resembling that of a bow. Eyes are all according to a type, half-open, with full upper eye-lid and the

19. In the Persian style also both the male and female faces are drawn heavy with large cheeks making the face round. To connect any association in between the face drawing adopted in these two techniques - the Mughal and Persian would be stretching the argument a bit too long. The Mughal artist only after being particular of the elongated eyes, has preferred round faces with heavier cheeks which may be a variation of the advanced cheeks represented in the Ajanta art.

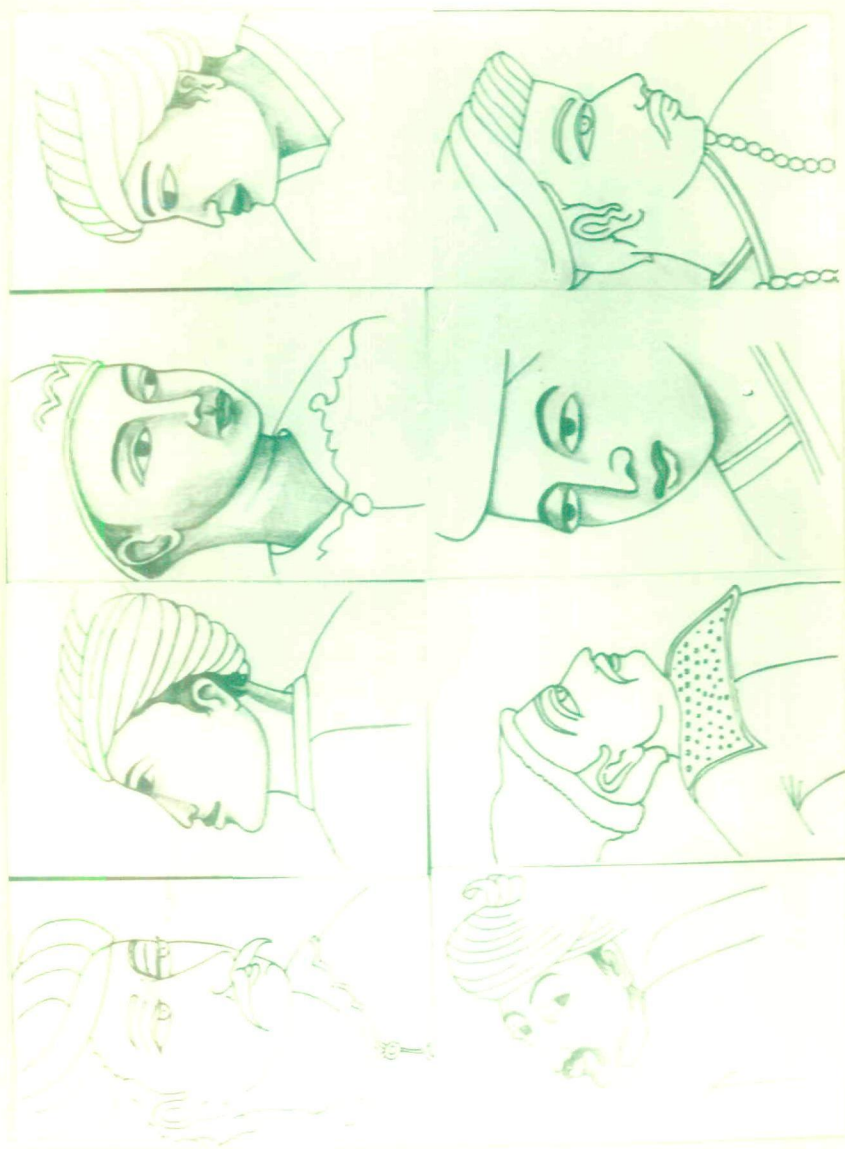


PLATE LV

looks directed below the eye-level. The position does not change with the change of the angle of the onlooker's face. Eyes, openfully or wide are very rarely depicted. The Mughal painters have shown their originality in the representation of eyes. The representation of eye-brow like a bow has differed from that displayed in the Ajanta, Ellora and Jaina's art and the Persian style also in which eye-brow is not so prominent as in the Mughal style. The similar case is with the eyes drawn by placing two concave lines in opposite settings. The tradition of drawing the upper lid heavy and slightly elongated eyes (specially drawn in the faces of women) affiliates the Mughal style with the Indian tradition (plate LVII). In a few instances in the depiction of one and a quarter or three-quarter faces the second eye is drawn slightly bulging or projecting outside (plate LV). The upper lid has become more curved and heavy; and the eye-ball is invariably shown at the extreme outer -- a tradition different from the Persian style and a variation of the Jaina's art in which the second eye is invariably drawn projecting outside.

Faces are painted in three-quarter or in profile and rarely in one

20. Akb; f. 32b, 169 (C.B.); Tarikh; f. 177a, 241b (Patna).

21. The Technique; p. 92. (The elongated eyes are sparingly employed in the figures of men also and no casual distinction is favoured by the artists in the representation of their eyes.).

22. Akb; ff. 1, 19 (C.B.); Tarikh; ff. 6b, 32a, 26b, 51a, 246b, 234a, 331a (Patna).

and a quarter profile. Back views of the head are met with casually²³ in congregational and war scenes. The Mughal painters preferred to²⁴ three quarter view - a convention of Persian painters. In the central figures where an artist had to show likeness in the face, mostly the²⁵ three-quarter faces are drawn. With the fusion of the Persian and pre-Mughal Indian traditions certain changes occurred in the Medieval Indian painting. The tradition of representing farther eye-brow and the farther eye was discarded; although this was not the last phase in the representation of human face in the Mughal art. With the development of the Mughal school the practice of drawing figures²⁶ in three quarter view was replaced by the strict profile. Nevertheless this change had started taking place during the Akbar's reign and²⁷ strict profile was sparingly employed by the artists.

23. Akb; ff. 54, 248 (C.B.); pls. 32, 75, 102, 114 (V.A.); Tarikh; ff. 40b, 57b, 63b, 90a, 284a (Patna); Razm; pls. 82, 116 (Jaipore); pl. 21 (Baroda); Tuzuk; pls. 6, 25, 68 (Moscow).

24. "A careful study of the early Mughal paintings of Akbar period will show that the figures were usually drawn in three quarter view, strict profile was sparingly used. This was due to the influence of the Persian art tradition which preference to three view in the representation of the faces". The Technique; p. 57; 61.

25. See F.N. 11, 14, 15 and 16.

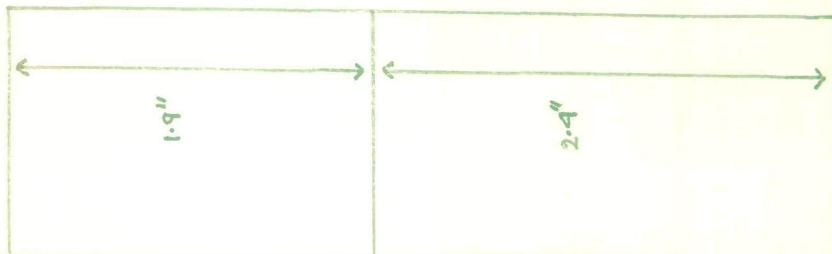
26. "But this method of representation was not a lasting face in Mughal art; it had to make way for the rigid profile. From the time of Shah Jahan onwards the faces were mostly represented in rigid profile; all the vestiges of ancient three-quarter view had disappeared". The Technique; p. 62.

27. See F.N. 10 and 15; Tarikh; ff. 323a, 331a, 322a (Patna).

The moustache and the beard are drawn to the details of each single hair. Details are also given in the varying forms of nose, lip, chin and the facial outlines. Faces are drawn in round curved outlines giving the impression of their being fleshy and this regardless of the age of the figures shown. An old man is thus distinguished not by the facial depressions but by white hair or bended back etc. Rarely, a few commoners - beggars etc. are depicted with depressed muscles, bended posture and lean and thin body. Bold and deep outlines are employed to express the forms of various parts of the body.

For depicting subtler ideas such as emotions, moods, age and the circumstances of misery or happiness the artist contends himself with the use of some symbols drawn from bodily gestures and postures. Here too, he is the least concerned with the mechanism of the body. A bended waist, a white beard and a staff is all that is needed to make a figure look old. Tense eye-brows comes as a symbol of anger. Surprise is depicted by the fore finger resting on the lip. Fright

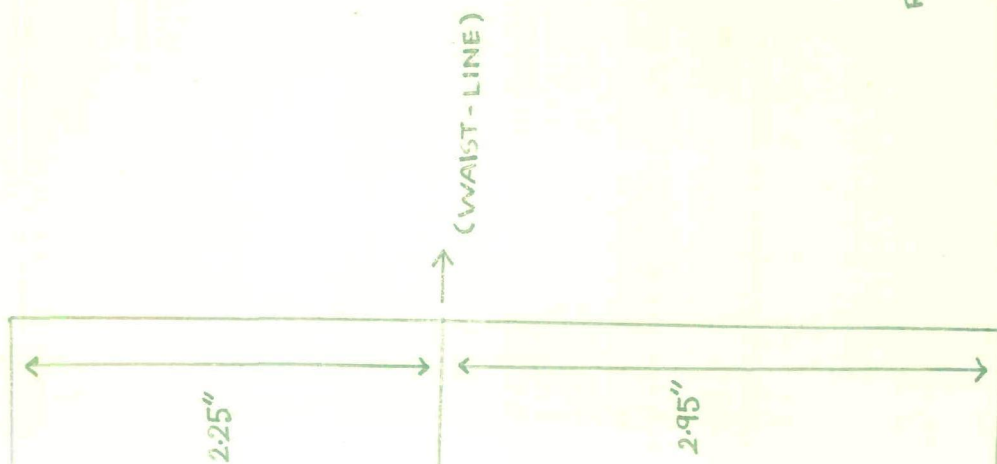
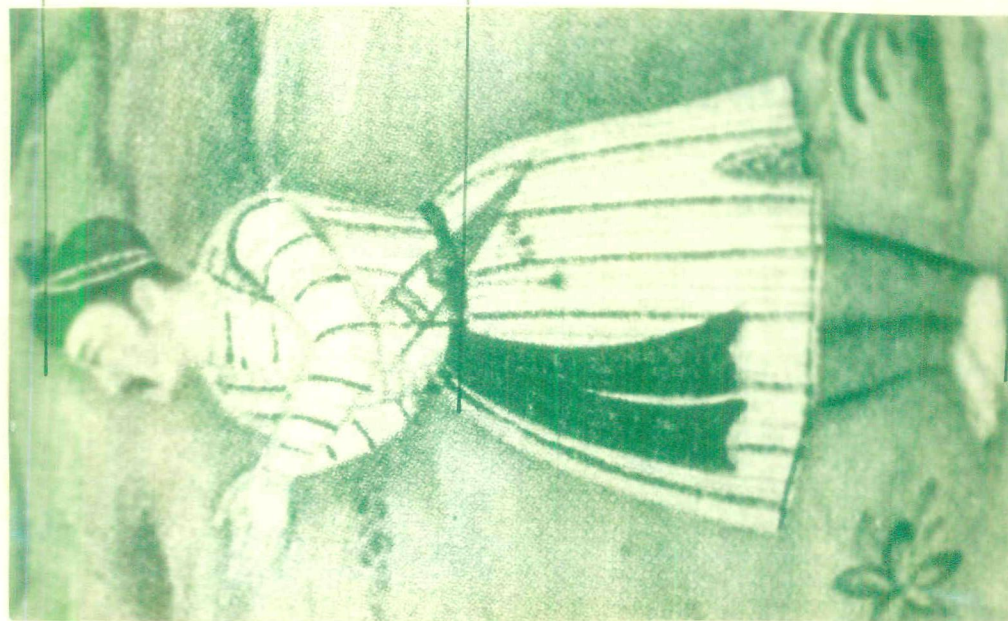
28. Akb; ff. 7, 27b, 32b, 147b, 148, 168b, 245, 248, 263 (C.B.); pls. 9, 21, 28, 41, 48, 75, 82, 89, 96, 110, 112, 113, 114 (V.A.); Diwan; ff. 19, 30, 177, 314 (Rampur); Tarikh; ff. 3b, 4b, 6b, 40b, 48b, 60b, 89b, 90a, 118a, 123b, 131b, 166b, 205b, 206b, 254a, 284a (Patna); Tuzuk; pls. 3, 16 (Moscow); ff. 6, 35, 84, 492, 504 (B.M.).
29. Akb; f. 263b (an old man shown in the lower margin with a child) (C.B.). Tarikh; f. 254a - an old man holding a bag, dressed in a doshala, ends of which are tied in the front (Patna).
30. See F.N. 28.
31. Akb; f. 169 (C.B.); pls. 17, 18, 25, 61, 79, 88, 116 (V.A.); Tarikh; ff. 6b, 118a, 157b, 169, 193a, 205b (Patna); Tuzuk; f. 285 (B.M.).
32. Akb; ff. 6b, 32b (C.B.); pls. 6, 17, 34, 77, 82, 112, 113 (V.A.); Tarikh; ff. 6b, 7, 30b, 40b, 59b, 90a, 118a, 246b, 331a (Patna); Razm; pls. 13, 38, 75, 120, 136 (Jaipore); Tuzuk; ff. 35, 44, 279, 417, 492 (B.M.); pls. 1, 8, 17, 21, 23, 24, 35 (Moscow).



→ (WAIST-LINE)

RATIO: 1:1.3

PLATE LV(CA)



RATIO : 1:1.3

PLATE LVI (B)

33

symbolised in the eyes held wide open. The rest of the body remains unaffected by the emotion sought to be captured - each symbolic gesture remains isolated. The artist has a rich variety of such gestures and cleverly uses them in order to endow his creations with rhythmic effect.

The Mughal artist have got their own ideas of the proportion of human body. Much care is taken for maintaining correct proportion, proper height and girth. Dr. Kotichandra has tried to determine the proportions of the body generally used in the Mughal Salam. His measurements, which are approximate, seem to have been taken from portrait paintings and exhibit a fairly good knowledge of human physique. These measurements vary from painting to painting and for one, it has become difficult to find out the set proportions of body (plate LVI). Broadly speaking, the part of the body above the waist is generally shorter in proportion than the lower one. The proportions established in them are 1 : 1.3; or 1 : 1.2; or 1 : 1. In a few instances the

33. Akb; f. 32b (V.A.); pls. 17, 18, 22, 34 (V.A.); Farikh; ff. 32b, 139, 241b (Patna).

34. "According to the tradition of the Mughal painters the height of the body should be 8, $8\frac{1}{2}$ and atmost 9 spans; beyond that the figure goes out of proportion. The face should measure one span, the middle point of the chest falls on the second span; the naval of the third, the penis on the fourth; thigh at the fifth, knees, at the sixth, shin at the seventh span and the foot at the eight span. If the body is represented more than eight span in height the distance between the parts of the body described alone in increased". The Technique, p. 63.

35. Plate LVI (The conclusion has been drawn after measuring several standing figures; a few of the importance are represented in the plate with the reference of folio no. and the name of the manuscript).

position is reverse and the part of the body above the waist is
³⁶
 longer than the rest below. In the standards given by Dr. Motichandra
 the case is a bit different. He has divided whole body in 8 spans
 and the face measures one span. The naval- on which the patka is
 girdled; falls on third span, dividing the full figure in the propor-
³⁷
 tion of 3:5 e.g. 1: 1.66. The facial proportions given by him are
 also better than those found in the illustrations. But this can be
 judged only by observations. The figures are too ^{small} ^{is} be correctly
 measured.

³⁸
 Similarly, ladies figure exhibit the part of body below the waist,
 longer than the upper part.

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36. Tuzuk; ff. 54a (figure shown with folded hand before Babur); 208b (a noble standing before king, dressed in yellow Qaba); 252a (a noble shown standing with the palms resting on a stick in the right extreme above); 260 (standing figure -extreme above in the left margin dressed in white turban and red trouser); 418 (a figure shown dressed in a crimson red gadar in the centre of above group); ff. 2, 80, 83, 128, 163, 190, 199 contain other such examples. Similarly in the Moscow copy of the same MS. six illustrations: 10, 16, 18, 24, 25, 64 display the figures with the upper part of the body longer than the lower one, down the waist. And more instances may be seen in the illustrations contained in other MSS.: Tarikh-i-Alfi; Razmnama (Jaipore) Akbarnama (V.A.) etc. etc.
37. "The following is also the proper length or breadth of the various parts of the body:- The breadth of an eye is one digit or angul; the ears are situated at a distance of two anguls from the eyes; the nose is two anguls long; the mouth and the chin measure two anguls (mouth one angul, chin one angul); the length of the neck is three anguls; the breadth of the temple is four anguls; length of the shoulder blades is one span; length of the ~~arm~~ including the hand is four spans, length of the stocach is four spans etc". Ibid.
38. Ladies figures are drawn slim in body. The upper part of the body is always drawn snort than the lower-down the waist. Tarikh; ff. 8b, 40b, 72a, 205b, 284a (Patna); Razm; pls. 5, 7, 19, 27, 116, 118, 127 (Jaipore); Tuzuk; f. 295 (B.M.); pl. 1 (Moscow); Akb; f. 143b (C.B.); pls. 3, 79 (V.A.).



PLATE LVII

Ladies though rarely depicted in the illustrations, are painted with similar expertise. The lady is also a type. With the help of slight variations in the nose and chin, the same standard form seem to be repeated everywhere. Nose is drawn invariably longish with pointed or round tip. A small round chin is replaced by a bulky chin. The eyes, forehead, lips, bulk of the face remain as usual drawn on set standardised lines (plate LVII). The female face and body carries a certain delicacy about it but for distinguishing it from the male, the artist depends mostly on the clothes, hair, ornaments and other such peculiarities. On these also he depends for distinguishing between the status of one female figure from another as in plates 1 and 32 of the Tuzuk (Moscow) showing a princess with her attending maids. Their faces are oval in shape, with round chins and longish noses. It seems that female figures are drawn according to strict rules, so that the figures appearing in different manuscripts and drawn by different artists do not substantially differ from each. The examples found in the plates referred above may be found repeated in the B.M. copy of the same manuscript, though there is a clear difference among the male members. A striking example of this kind of

39. Akb; ff. 25, 143 (C.B.); pls. 8, 9, 46, 78, 79, 82, 97 (V.A.); Tarikh; ff. 7b, 8b, 12a, 40b, 72a, 104a, 128b, 134a, 205b, 241b, 284a (Patna); Razm; pls. 5, 7, 10, 13, 14, 17, 18, 19, 21, 27, 40, 41, 68, 72, 78, 79, 81, 84, 86, 92, 101, 116, 118, 121, 124, 125, 130, 127 (Jaipore); Tuzuk; pls. 1, 32, 67 (Moscow); ff. 13, 256, 295, 314 (B.M.).

40. Tuzuk; ff. 13, 256, 314 (B.M.).

formula painting is provided by the figures of two ladies shown in folio 13 and 256. These are different individuals but have a striking resemblance with each other.

The same is true of common ladies. Facial lines of the three female musicians shown on plate 8 (Akb. V.A.) in a group holding castanets, duhul etc. etc. are so similar that they appear twin sisters. Similar case is with the figures shown in the lower margin - a group of three ladies two of them holding changs; and the dancers. All these figures may be taken as three different types which imply basically common standards : curved eyebrow, long eyes with heavy upper lid, long pointed or round - tipped nose, a clearly distinguished round chin, thin small lips - all composed in a round or egg shaped outline of a fleshy face. Similarly, the ladies belonging to different strata represented on plate 78 (Ibid.), sketched by Keshu Kalan have striking semblance. In the other work of the same artist on plate 79 (Ibid) the female dancers and musicians are drawn again on the set proportions of the facial lines - common in the former example. In a example from Akb. (C.B.), a scene depicting rejoicings at the birth of Salim, composed with a musical party in the centre represents female dancers in the accompaniment of male and female musicians and a few lady attendants. Here also the painter is assisted by a few restricted lines and standards : oval face, slightly pointed nose, small round chin and long eyes with curved eye-brow (f. 143b). In all the instances the difference occurs only on the basis of the skill of draftmanship of an artist; whereas the style remains the same.

Ladies painted by Kesu, Khem, Jagan, Hussain Naqqash, Lal, Madhu, Mohammad Kashmiri Sahu, and Paras in the Tarikh (Patna) include royal-⁴¹ princesses, female attendants, dancers and musicians etc. A number of female figures represented in folio 134a - all are identical. Similarly ladies shown on folio 72a of the same manuscript are a type. The central figure of a royal lady wearing long cap, attending maids wearing similar caps and dancers etc. are stereotype. An unsigned illustration on folio 40b has displayed ladies of different professions. Semblance is the striking feature of them. On the above part of the folio 234a rhythmic figures of ladies drawn in a few lines and curves evidence the perfectness of an artist in the representation of varying postures and actions. Simplicity of form^{is} the main characteristics of these figures. No doubt, the monotonous effect has produced in this part of the illustration due to the similarity in costumes, ornaments head-gears etc; and semblance in the bulk of body and contours of faces. More-or-less the monotony is released by the figure of princess drawn in the European tradition. The deep shading, heavy folds in her cloths, the style of covering the head reminiscent to Virgin Mary; all suggest European style. In the other instance, treatment of the Draupadi's Sari - a costume worn by Hindu ladies, shown on plate 10 (Razm; Jaipore) with thick shaded lines and deep curves; is also an introduction of the European technique of colouring in the Mughal Qalam. It was an starting face of borrowing style and methods of Art from European Source.

41. Tarikh; ff. 7b, 8b, 12a, 40b, 72a, 104a, 128b, 134a, 205b, 241b, 234a (Patna).

The painters of the Razm (Jaipore) have drawn ladies in a strict
⁴²
 profile, though depiction remains the same. In a few instances the
⁴³
 eyes have become wide. The face is mostly round and the small, round
⁴⁴
 chin is drawn with large cheeks.

The full figure of a lady is also a type. These are directly drawn
 on set formula lines -- viz. long slim body, a thin waist, broad span
 of shoulders, high-breasts, long hand with longish fingers and gener-
⁴⁵
 ally the part of the body above the waist shorter than the rest below.

The characteristic features of ladies belonging to the nobility and
 the commoner's class are alike. For female face, the artist evidently
 depend to a large extent on imagination. Few standard lines and curves
 that served his purpose came handy to him and these be made use of,
 for the representation of ladies with such adjustments as a pose demand.

42. Ladies are depicted on 28 illustrated plates: 5,7,10,13,14,17,18,19,
 21,27,40,41,68,72,78,79,81,84,86,92,101,116,118,121,124,125,120,
 127; Sketched by 13 artists - Basawan; Daswant; Jagan; Jagjiwan;
 Kanha; Khemkaran; Lal; Mohammad Sharif; Mukhlis; Mukund; Paras;
 Tara and Tulsi. They are assisted by Anis; Babu; Bhagwan; Chatar-
 abhuj; Chittra; Dhanno; Ghulam Ali; Jaswant; Kanha; Kesu; Lal;
 Madhu; Miskin or Miskinah, Mukhlis and Ramdas.

43. Ibid; (faces of ladies).

44. Ibid; Ladies faces (specially drawn in profile) are heavy than
 those depicted of men. The painter has increased the distance
 lying in between the nostrils and the ear-lobes; so as to provide
 an ample space to an elongated eye. This is invariably true of
 the female faces where an elongated eyes are employed. (See also
 F.N. 19); plate LVII, fig. 4.

45. See F.N. 38.

The portraits of ladies depicted in the illustrations are therefore not the record of actual likeness but are imaginary pictures. An artist had hardly any opportunity to see the subject of his portrait and under the circumstances a few favourable set lines become handy to him in the production of an ideal type. A few characteristics, in the treatment⁴⁶ of women appear borrowed from the Indian tradition.

But the Mughal painters were not quite imitators, who adopted others ways of expression in their own mode of depiction and thus the identity of the Mughal school remained distinct. In the Razmnama illustrations only in three instances winged - human figures are represented, knowledge of which seems borrowed from the European paintings; appear as a variation of the angels depicted casually in the latter. Round heads with small, curly-hair; muscular-body; thick, shaded-lines and wings on the back-all justify the knowledge of European Art in the background; and the whole some-effect of three-quarter faces, expression depicted through lines and the treatment of the wings - evident the originality of the Mughal artist (pl. 16; Razm, Jaipore). Other two illustrations depicting angels in a garden or sky, are identically the pieces of an

46. "It is however, in the treatment of women that the painters have borrowed from Indian traditions. This might have been due to the unfavourable reaction of the Mughal painters who failed to distinguish between the facial characteristics of male and female figure. On the other hand the charm of Indian women with their lovely costume must have appealed to them strongly, and hence whenever women are represented in profile or three quarter view; the treatment of their eyes is like patola - a trait borrowed from Jain paintings". The Technique; p. 92.



PLATE LVIII

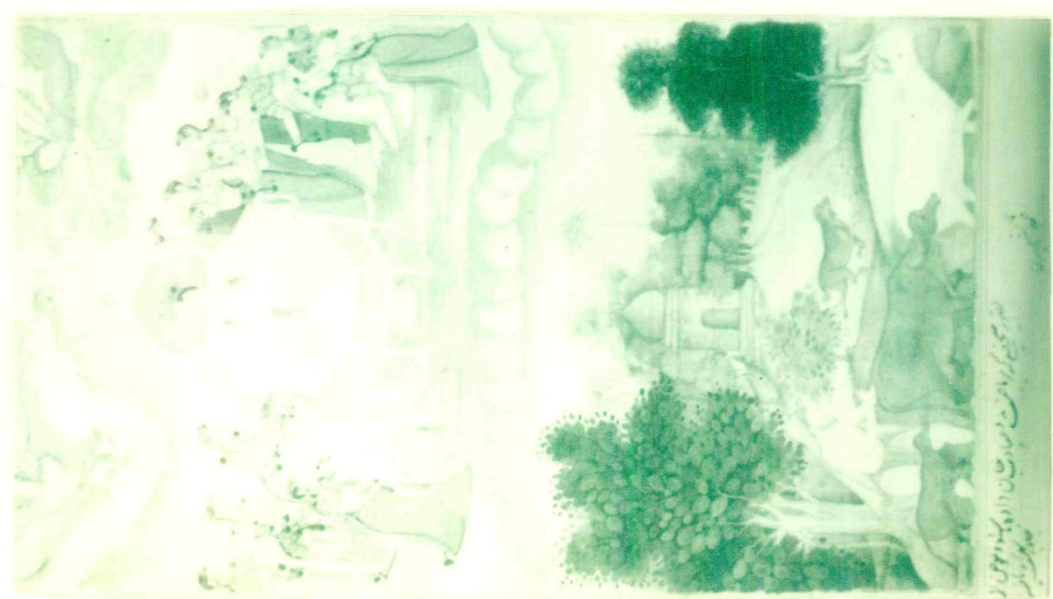


PLATE LIX



PLATE Lx

European Arts (Pls. 19, 20; Razm, Baroda). The long flowing costumes with heavy folds; posture of their hands; books with them; hair-style; deep shaded-lines; the display of roundness and depth in the object - all are the borrowed elements, assimilated in the Mughal Qalam - tending towards a new trend in the history of Indian Art (plate LVIII & LIX).

The rhythm of an action taking place in a scene, is sought to be depicted through a partial participation of figures in it. A gesture by the hand, the positioning of a leg or some ruffles in the costumes and such other exterior motions are utilised to produce the ^sreponses. The face, the eyes, the lips remain absolutely indifferent, even the attitude of the body is not wholly adjusted.

The hands, unless they are involved in a specific action, are shown in a few standard attitudes - folded on the chest, languidly hanging gripped in front, palms closed or opened with one or two upraised fingers or even raised flatly with the fingers and thumb raised upward,⁴⁷ in the typically Indian fashion. These postures seem to be introduced in order to emphasis the nature of action taking place in the scene (plate LX).

Ornamentation of the human figures is done by decorating their costumes, arms and armour etc. Care is taken to differentiate among the designs and motifs given to the figures appearing in a single scene. Sometimes these patterns are so prominent as to attract the eye away from the face.

47. "An important contribution of the indigenour Indian art to the Mughal School of painting is mudras or graceful hand poses". Ibid; p. 64.

ANIMAL FIGURES

Animal study in the illustrations is the most significant aspect. The artists were endowed with keen observation. A good many representation of animals and birds, painted separately or together with others in action as in the scenes of hunting, catching of birds and animal fight etc. are the example of realistic art and minute detail work. Animal portraits are not wanting in the art-collection of the Mughals. Many of the artists showed their skill in the portray of the animals and a few of them specialised and produced masterpieces. They excell in capturing the likeness of the animals in all sorts of natural postures, bringing out the involvement of muscles and part of the body with almost graphic perfection. They can enliven expression of a ferocity or compassion or fear and bodily tensions with a virtuosity that comes only through the coordination of a high degree of skill and power of observation.

In the manuscript Anwar-i-suhaili (Varanasi) animals are the subject of some tales and fables. Assembly of beasts, beasts at their prey etc. are the themes to accommodate various species of birds and quadrupeds. Various copies of the Tuzuk-i-Baburi manuscript contain

1. Anwar; ff. 17,25,30,48,55,71,80,144 and 160 (Varanasi).
2. Tuzuk; pls. 25,42,43,47,53 - 86, 113 (37 illuminated pages) B.M., pls. 44,63,64,74,80,81,88 -113, 139 (33 illuminated pages) Delhi; pls. 22,25,26,36-47 (15 illuminated pages) Moscow.

a series of the illustrations displaying flora and fauna. Vivid portrayal of animals in groups is the central theme of the scenes depicting huntings, trapping of birds and animal-fights. Besides it, their portraits in pair or single are the subject of whole pictures. Akbari painters have equally favoured quadrupeds, birds and aquatic animals. The Akbarnama manuscript is equally rich for the group portraits of animal life in hunting and expedition scenes. In these miniatures animals are drawn in pair or groups - oftentimes various species of birds and animals within one compositional group. The last is true of hunting and bird trapping scenes.

Animal portraits are blended harmoniously. In these reproductions the bright-colour- effect as usual in the Mughal miniatures has been avoided. Landscapes are subdued in harmonious colours. Various colours are painted in softer tones and thin colour wash of light tints are filled in the objects. The soft colour scene, subdued in tone has enhanced the soothing effect in the landscape, in which mostly the green and blue pigments dominate the whole view. In these miniatures, accuracy in form and display of as many details as possible, appear to be the keynotes of the artist's skill. Well defined outlines and maximum visuality are the chief characteristics. The animals are invariably drawn in profile and although figures of individual animals in the state of rest are also drawn, it is the state of violent

3. Akb; pls. 17,18,22,24,40,44,81,84,90,92,93(V.A.); f. 155b (C.B.).

action which has fascinated the artists most. The Mughal painters differ from the Persian style in as much as the animals are seldom shown in the state of action⁴. The artist of the former not only displays a great variety of postures but go still further to make the representation more sensitive. Animal and bird figures are drawn in their natural surroundings.

Attention is also paid to the use of such pigments as reflect the actual colour of their skin and fur etc. One can not fail to admire the minute observation of the artists in which the characteristic features of the various animals, e.g. hair, horn, fur, ear and tail etc. are so realistically depicted as to enable one to distinguish their species at the first glance. Even with the rudimentary knowledge⁵ of their species one can distinguish them. However, it can not be said that the birds and animals-shown in the miniatures were drawn from the life, but there remains no doubt that the artist had painted them after a careful observation. For which he would have seen the object from the near and many times. As his creations are not mere the copy of the external appearance of the animals but are the truthful

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4. "But the animals are at once more natural and more self possessed than the remote and exquisite animals of the Persian school. They are more deeply engaged by the action and with the term of the system as much realism is given to the architecture and figure drawing by shading and modelling as possible". Barrett & Grey; p.81.
 5. Plate 7 of the Tuzuk (Moscow) contains the drawings of three dogs: a Himalaya short-haired greyhound and a pair of adiyag dogs; in illustration 22 of the same manuscript adiyag dog also can be seen, this folio has also a neel gai antelope lying in a catch of hunted animals. The one with a black mane and a larger tail is the onager. Folio 378 of the Tuzuk (B.M.) shows an elephant bearing spots on the ear, trunk and belly which was then commonly found

روح القدس آبرو فرخ	برقبت طاهر دم بر جبه	چرخ شمس و ماه
ملکت حاکمان کباب	در دولت و شرف و محلد	چرخ شمس و ماه
برسند سرو و بیاباد	منصور مظهر و سرمد	چرخ شمس و ماه
پهلو سلطنت شاه شمس و ماه	نیج شخص غیب ملک در و باد	چرخ شمس و ماه
خست باد شمس و ماه و لایق	که جان شمس و ماه و لایق	چرخ شمس و ماه
در قمر عالم شمس و ماه و لایق	که قمر عالم شمس و ماه و لایق	چرخ شمس و ماه
در شمس و ماه و لایق	نایم کا و ماه و لایق	چرخ شمس و ماه

PLATE Lxi

کلیه در سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه
چشمی که سیاه و لکی بود	چشمی که سیاه و لکی بود	چرخ شمس و ماه

Lxi

illustration of their mood, nature and emotions. For the purpose, besides the accuracy in line and form, actual representation of colour; the artist also depends on nature. Every figure is drawn in its natural surrounding. Their study leaves no place to doubt in the perfection of the work of Mughal artists in the portrayal of animals.

The Mughal artist shows the expansion of his thoughts by making the uses of bird's figures as decorative pieces on the page of exquisite calligraphy. Figures are drawn in narrow stripes in pair or groups on the above margin or in the centre of the page (plate LXI).

7

Under the present assessment, no less than forty names of artists

Contd:....

5. in the region of Kalpi. Scene of catching birds (f.190 B.M.) pl.21(Moscow), Bird trappers (Fog Art Museum), published in The Art of Mughal India, pl. 9- shows various kinds of aves such as hoopoes,parrots, ravens, quils, sparrows, wild doves, cranes, flemingos etc.etc. The Scenes depicting huntings, animal fights and the portraits of animals exhibit different species of lions, tigers (Anwar, ff. 30,48,80(Varanasi); Akb; 15,17,18,23,24,92 (V.A.); ff. 148,155b,(C.B.); antelopes - stag, black buck, chital,nilgao and other species (Akb;pls. 27,77,92,93(V.A.); Tuzuk pls. 63,64,80,89,90,91,139(Delhi); pls.42,43,53,61-63,113 (B.M.);pls.25,26,37,38(Moscow),Birds-peacocks, Indian parrots, shorak, pindavali(a kind of shork),Kanjai,pulpaiker,Kharchal, Charz,Saras,maniks,stroks,white buzal,ducks,magpies,wagtails, swallows,kuil,woodpeckers,partridges,cock,flamingo,shark etc. (Tuzuk; pls.44,94-109(Delhi);pls.25,65-82(B.M.);pls.39-44(Moscow); and water animals-water lion,siysar,sea pig,gharial,fish(Kakka) and Indian frogs etc. (Tuzuk;pls.112,113(Delhi);pls.83-86(B.M.) pls.45-47(Moscow).
6. Diwan (C.B. Collection).
7. Abdullah, Annant, Asi Kahar, Banwari Kalan,Banwari Khurd, Bande, Basawan,Bhawani,chatur,Dhanno,Dharmdas, Farrukh chela, Fattu, Hussain Naqqash,Ibrahim Kahar,Jahannath,Keshav Kahar,Keshav

Contd.....

در کابل قورانی که گویند یک دیگر خسته چلات کاسین



در برابر تو خدای بود و با شش غایب تو خدای منده و پستان
 شت او بسیار لایه زار است گوشت را بعضی مرغ غایب
 یابش بعضی با گوشت پسته از هر چل گوشت تمام اعضای او است
 و خوب است دیگر هر زار است جسته او از تو خدای پستی بار یک تر



و او باشد شیت ز او مثل تو خدای است سده او سباه است و دوا

PLATE Lxii

appear on the miniatures displaying the animal life. Greater number of these illustrations have been attributed in the name of Mansur, Shankar Gujrati, Basawan, Sarvan, Lal, Dhanno, Miskin, Mahesh, Surya Gujrati, Bhavani, Hussain Nagqash and Tara. Manohar, Dhanraj, Farrukh chela, Shivdas, Paras, Abdullah, Fattu, Anant, Lumanka, Lachhman, Jagannath, Payag, Ramdas, Asi and Bande etc. have contributed single pieces of their art.

Miniatures done by Mansur are superb creations and have surpassed other artists in skill of draught-manship, accuracy of form and the line-work. Although Mansur has not been mentioned by Abul Fazl, began his career in Akbar's reign and left many pictures from animal life. Two hunting scenes in the Akbarnama (V.A.) are his works. The series of eight miniatures painted by Mansur is presented in the British

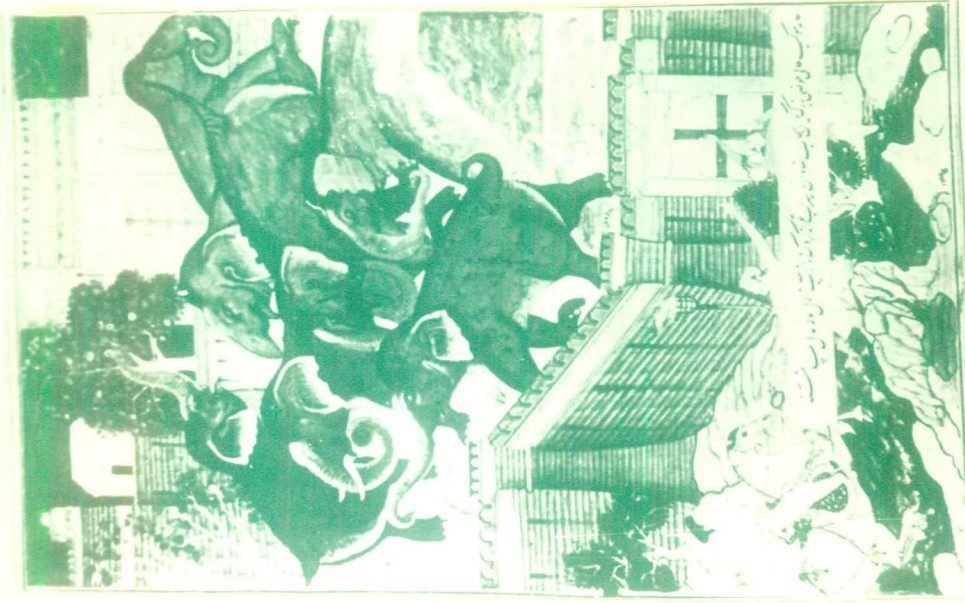
Contd7.

Gujrati, Kesu Khurd, Khem, Lachhman, Lal, Launga, Lumanka, Mahesh, Mansur, Makra, Miskin, Mukund, Nand Gwalari, Narain, Payag, Pidarath, Ramdas, Sarwan, Shankar or Shanker Gujrati, Shyam, Surjan, Surya Gujrati and Tara.

8. Manohar (Tuzuk, f. 283(B.M.)); Dhanraj (Ibid, f. 305); Farrukh chela (Anwar, f.30 (Varanasi); Shivdas (Tuzuk, f.351(B.M.)); Paras (Ibid; f. 347) Abdullah (Ibid, f. 284); Fattu, Ibid; pl.109(Delhi); Anant (Ibid, pl.108); Lachhman (Anwar; f.160(Varansi); Jagannath (Tuzuk; f.352(B.M.)); Payag (Ibid; pl.97(Delhi); Ramdas (Ibid; pl. 62(B.M.)); Asi Kahar (Ibid, pl.101(Delhi); Bande (Ibid, pl.103); Lumanka (Tarikh; f. 331a).
9. Akb; pls. 11/117 and 62/117 (V.A.); Fine Art of India and Ceylon, p. 193.
10. Tuzuk, ff. 387-89 (B.M.); Ibid.



PLATE LXIII (A)



(B)

Museum manuscript of the Tuzuk-i-Baburi. Roughly speaking, the artist Mansir was in the budding- stage of his talent under Akbar's reign and the ⁺maturity in work was still wanting. Even then the animal studies done by him are excellent example of minute scientific observation. The details are correctly rendered in them and the colours are vivid and brilliant (plate LXII).

Basawan, a most talented painter of the 16th century, is known for the illustration of numerous manuscripts. Various themes could be executed by him with equal facility. His name appears on more than a hundred illuminated-folios. Most exciting scene depicting the emperor Akbar hunting near Gwalior in 1561, attributed in the name of Basawan and Tara Kalan, is a masterpiece creation from the Akbar-nama (V.A.)¹¹(plate XIX). It is the example of joint work: Sketch (tarah) by Basawan and colouring (amal) by Tara Kalan. However, C. Welch is of the opinion that the tiger shown beneath the Akbar's sword is probably entirely painted by Basawan.¹³ In most of his works¹⁴ Basawan is assisted with other painters and produced fine pictures when he got a talented artist like Tara, Miskin, Bhim Gujrati etc.

11. Encyclopedia of World Art, Vol.II; pp. 384-87.

12. Akb; pl. 17 (V.A.); Tarah by Basawan and Amal by Tara Kalan.

13. The Art of Mughal India; p. 28.

14. Akb; pl.17(tarah Basawan, amal Tara Kalan); pl.18(Tarah Basawan, amal Sarwan); pl.22 (tarah Basawan, amal Chatur); pl.24 (tarah Basawan; amal Dharmdas) V.A.

15. Ibid; pl. 22.

at his side. In the other example ¹⁵ two thundering elephants shown crossing a bridge, Basawan has preferred diagonal composition. The display of violent force and physical movement in the animal figures in a well balanced composition reveals the skill of the artist (plate LXIII A).

Abul Fazl mentions him immediately after Daswant and reckons his talent. In his remarks, he was most excellent in backgrounding, ¹⁶ portrait painting, distribution of colours and several other branches. Animal drawings sketched by Basawan vividly report the action. Mostly, he composed the animals in pair or groups and attained the fame for his animal drawings.

¹⁷ Lal seems to prefer the portray of deers. Accuracy in their form and their changing moods and postures, delicacy in their nature all are remarkably guarded by him (plate LXIII B). Like Basawan, he is also ¹⁸ assisted by other painters. Kesi Khurd, Khem etc. worked with him ¹⁹ as a side artist. The drawings composed by Miskin are distinguished for rhythmic, forceful lines. Elephants drawn on plate 90 (Akb.V.A.),

15. Ibid; pl. 22.

16. Ain, Vol. I; p. 114.

17. Ibid.

18. Akb; pls. 44, 92 and 93 (V.A.).

19. Ain, Vol. I, p. 114.



PLATE LXIV



PLATE Lxv

These cases are exclusively employed to hold the bows only. The bow is carried in another case hung on the left side of the gridle. It is of the shape of a half bow and is sufficient to accommodate only ⁷³ as much. The other half of the bow remains outside of it. It is a flat case, broad at mouth, one side straight and the other sloping to a point.

The tarkash shown on plate xii, fig. 15; No. 16, p.117 in the Ain ⁷⁴ (Bloch.); is different from those represented in the miniatures. Here, Blochmann confounds Quiver (tarkash) with the bow-case (qirban; p. 963, Steingass). Both the tarkash and the qirban may be plain or embellished with floral motifs.

The Matchlock; a tufang (Steingass, p. 324).

This kind of matchlock that are found in the illustrations have a shape and mechanism identical with the earliest hand guns developed ⁷⁵ in Europe in the middle of 15th century. Akbar made a great contribution towards the manufacture of matchlocks. They include guns ⁷⁶ and cannons. Abul Fazl has mentioned that with the exception of Turkey, probably no other country had comparison of the Mughals in this field.

73. Ibid; figs. 15-17.

74. Ibid; figs. 28-31.

75. Ain (Bloch.), Vol. I; p. 119.

76. Ibid; Vol. I; p. 119.

⁷⁷
The hand gun (namal) has a long barrel mounted on a but and is shot with the but resting on the right shoulder. The pivoted cock hammers the priming-pan containing some sort of ingetious material, probably a rope soaked in combustibile solution which is lighted to give a burning flame or a hot coal¹. The sooner the ramrad is pressed, cock strikes the priming pan, and the ball of gun shot are shoved⁷⁸ into the barrel through the nozzle. The pargaz, a groove into which the ramrod is put could be made in a side also. Barrels are long gradually tapering towards the end opening like a funnel. These are embellished with floral or geometrical bands. The bottom is fixed transversely to the barrels (nals; steingass p. 1378). Their stocks are also ornamented.

⁷⁹
The gainal rarely shown on folio 187b (Akb. C.B.); is similar to the former with the difference of the size. It is heavier than that and carried by an elephant on his back. The gun is placed in a howda, resting on two bars crossing digonally. It seems a device⁸⁰ of setting the nal to different angles.

⁸¹
The guns are of two length: 72 inches or 45 inches. The long ones⁸² are given the name of damanak.

-
77. "Guns which a single man may carry are called namāls". Ibid.
 78. Plate LXXXV, figs. 1-3.
 79. Ain (Bloch.) Vol. I. p. 117 (a gun which easily be carried by a single elephant).
 80. Plate LXXXV, fig. 6.
 81. Ain (Bloch.) Vol. I; p. 120. (Irvine mentions their length 66 inches and 41 inches respectively. The Army; p. 103).
 82. Ain (Bloch.) Vol. I; p. 120.

83

The cannon is also of the usual time rested on two or four wheels depending on its size and weight. These are generally embellished with metallic bands geometrical, engraved-desings. Some of the cannons are very long barrellled, sharply tapering and heavy funnel shaped nozzle. Abul Fazl has mentioned that the guns are made of such a size that to transport them several elephants and a thousand of cattle are employed.

85

Lastly, the guns (jazail; Steingass, p. 362); resting on a tripod, is shown employed in the siege. This is a long barrellled gun. Abul Fazl has mentioned that for the siege and naval engagements there are separate guns, but has not given their description. The cannon could also be raised to an angle. For the purpose triangular, wooden-stand hav^{ing} a sloping platform, is employed.

THE ARMOUR :

The Mughal army is shown well armoured while taking the field and that include those charged with such auxiliary assignments as

83. Plate LXXXV, figs. 11,12.

84. Ain (Bloch.) Vol. I, p. 119; Akb; pl. 72 (V.A.).

85. Plate LXXXV, figs. 9,10.

86. Ibid; figs. 7,8.



PLATE Lxxxvi

beating up the drums, driving the elephants and carrying of royal insignia. The metallic armour of a soldier consists of five to six pieces including a helmet, a coat of mail, arm-guards, leg-guards and sometimes a pair of plates fastened on the chest and the back.

The helmet :

The helmets are all dome shaped, plain or foliated but always surmounted by a pinnacle shaped like an arrow head or a plume or just a knob on it. The various helmets represented in the illustrations can be broadly divided into three categories which has already been stated by Abul Fazl in the Ain. On called dubalghah is just a head cover intended to protect the skull. The other two are called zirih kulah. One of these is provided with side plates to protect the ear. Separate pieces of the plates are connected to the helmet or the helmet may be moulded in one piece with them. Plates are round or V shaped or sometimes foliated at the end. The other has this as well as a broad chain-sheet at the back, covering the back and sides of the neck. This sheet is made of small chains or plates hinged together. Casually, the chain-mail could be connected with dubalghah. To protect the nose, sometimes, a long, narrow and flat plate having an arrow head on either sides is fixed in the front of the helmet.

1. Plate LXXXVI.
2. Ain (Bloch.) vol. I, pls. xiii, xiv; pp. 118-119.
3. Plate LXXXVI, figs. 1, 12, 18.
4. Ibid; figs. 2-7.
5. Ibid; figs. 12, 13, 18, 19.

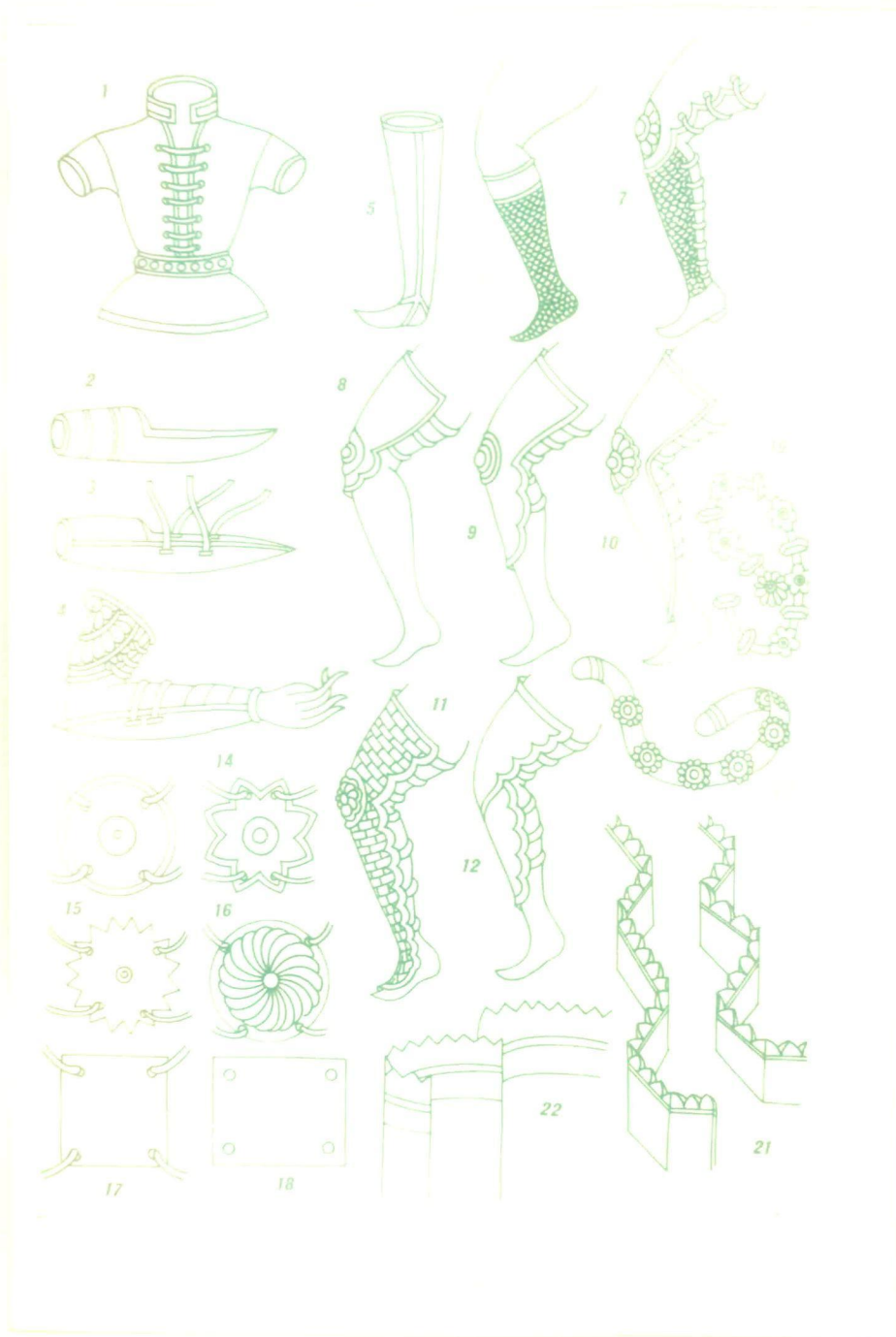


PLATE Lxxxvii

6

Besides these, rarely; we come across of an European helmets consisting an extra plate to protect fore-head. The dome of the helmet is slightly elongated and surrounded by a pinnacle at the top like that of the Mughals. The helmet shown in the folio 61 (Tarikh, Patna) intermediary of the Mughal and European helmets; seems the innovation of the Mughals.

8

Babur mentions that a soft cap known as duwulagha burki was worn first on the head and the helmet was worn over it, to make it comfortable.

9

The baktar :

It is a coat of mail and is worn under the zirih. Its long sleeves coming out of the sleeves of the zirih and are close fitting to the arm. It is often made of chips of metal arranged like fish scale. It has a high collar.

10

The Zirih :

Another coat of mail, the zirih is made of metallic chains. It has a plain collar and half sleeves and is buttoned or chained in the front. On the whole it looks like a jacket.

6. Ibid; fig. 19.

7. Ibid; fig. 11.

8. Baburnama, Vol. I; p. 167.

9. Ain (Bloch.), Vol. I, fig. 47, pl. xiii; no. 58; p. 118.

10. Plate LXXXVI; figs. 21, 22.

11

The Sadiqi :

It has closely resembled the zirih with the difference of length.

The Joshan :

It is a breast plate, fastened on the chest by cross strips running over the shoulders and fastened at the back. The figure of Joshan given in the Ain (Bloch.) on plate VIII (no. 48), appears to be a¹² breast plate covering the chest and stomach. Blochmann has described it as an armour of the chest and body. Hence, the plates represented¹³ in the illustrations are an armour for chest only. A similar plate was worn on the back also. These are round in shape, with plain or foliated edges and sometimes embellished with floral patterns in the centre. Plates - rectangular or square in shape are not used frequently.

Probably, these separate pieces: plates for the chest and back,¹⁴ were an alternative of chahar-aina. The latter, is an armour employed to protect the chest and the back and has been mentioned by Abul Fazl. It consists of four plates square or slightly rectangular plates-two small and two large. All these plates are connected by chains and are worn so that the larger plates cover the chest and the back while the smaller ones protect the sides. The side plates have a depression

11. Plate LXXXVII, fig. 1.

12. Ain (Bloch.) Vol. I, fig. 48, pl. xiii; no. 59; p. 118.

13. Plate LXXXVII, figs. 13-18.

14. Ain (Bloch.) Vol. I, fig. 49, pl. xiii; no. 60; p. 118.

at the top fitting the arm-pit. All these plates have decorated borders and are not flat but slightly bent inside in view of the curvatures of the chest. It must have been worn under the zirih¹⁵ as it is not visible to us in the illustrations. Babur also mentions a chest guard by the name of gharicha.

16

The rag :

It is a leg guard made of small pieces of steel and chains and covers the whole leg right from the toe to the middle of thigh. Thus in one piece it looks like a leg with a foot corner, and covers the foreleg and the thigh. This is different from iron socks and leg-guards. The latter are not used along with this.

17

The muzah-i-ahani :

This is the iron sock covering the foot and foreleg. It is made of two separate pieces. The front has a shin guard and a cover for the upper surface of the foot. This is made of a sheet of metal and both of its pieces seem either cast or connected by means of hinges. The second part of the muzah-i-ahani comprises a guard for the calf muscles, the heel and the sole. This piece is worn separately and hinged to the shin guard. It seems to be made of iron stripes.

15. Baburnama, Vol. I; p. 315.

16. Ain (Bloch.) Vol. I, fig. 56, pl. xiv; no. 69; p. 118.

17. Plate LXXXVII, fig. 5; Ibid; fig. 57, pl. xiv; no. 71; p. 118.

18

The leg guard :

The leg guard is worn as an alternative to the mauz-i-ahani and the rag. As to compare the last two it allows for greater mobility and freeness. It is made of several plates rounded at the ends and bent about the curve of the leg half way above and below the knee. The back part of the leg remain bare except for stripes used to bind it to the leg. An additional knee-cap is provided in the middle.

Another kind of the leg guard is a single sheet probably of cast
19
iron or brass. It covers the thigh, the knee and the upper part of the shin-bone. Leg guards are made of varying length. The shortest covered the thigh and knee only. The other two protected full or half of the shin bone respectively. The longest of its type rested below on the foot. The former three are frequently used. Casially,
20
a chain-mail is fastened on the shin bone as an alternative of the long leg guard. These leg guards may be plain or engraved with floral patterns.

21

The dastanwa :

It is an arm guard composed of two pieces connected by laces or chains. The large piece covers the hand from the wrist to the middle

18. Plate LXXXVII, figs. 7-12.

19. Ibid.

20. Ibid; fig. 7.

21. Ibid; figs. 2-4.



PLATE Lxxxviii

of the fore arm. It is worn so that the larger piece covers always that side of the hand which faces the enemy while weilding the sword.

²²

The Ain also shows an extension in this armour so as to provide a covering for the back of the palm.

Rarely, we come across of a round plate, moulded to the form of an

²³

arm, employed as an armour. It is provided with strips to fasten and is worn so that the armour covers always that side of the arm which faces out.

Armour of the horse :

The armour of the horse consists of two pieces: one covering the head and the face, and the other the body.

The Qashqah :

A single steel plate moulded to the form of the horse's head and face, with holes for the ears and the eyes, is what is known as

²⁴

Qashqah. It is tied with strips running about the jaws. Some of the horses are shown armoured with a smaller head cover leaving

the eye, the whole mandible and fore-head bare. The Qashqah shown

²⁵

in the Ain has a decorative pattern engraved upon it but those shown in the illustrations are plain and decorated the both.

22. Ain (Bloch.), Vol.I, fig.55, pl. xiv; no.68; p. 118.

23. Plate LXXXVII, fig. 4.

24. Plate LXXXVIII, fig. 1,2.

25. Ain (Bloch.), Vol. I, fig. 60, pl. xiv; no. 74; p. 119.

The Urtuk :

This is the main armour of the horse and protects the body from the shoulders to the tail and from the back down to the chest leaving
²⁶ only the legs bare. It is made of large iron plates or chains or of both. The joints of this armour are rivetted with nails having large floral heads which seem also a decorative. At the base of it usually a lace is provided and this too is a decorative device.

The armour of the body, called urtuk is made in varying forms and sizes. First form covered the animal from neck down to the chest and the back and belly, the second form left the neck bare. The last protected only the back and belly. Another armour was provided
²⁷ ²⁸ with the latter to guard the chest. Ain displays two of its forms similar to the former two types. Although the last ^{too} is frequently used.

²⁹

The neck - plate

This is an one piece-armour made of chains and small plates hinged together, measuring the full length and moulded to the form of the animal's neck. The straps are provided to fasten it around the neck.

26. Plate LXVIII, figs. 6-8.

27. Ibid; fig. 5.

28. Ain (Bloch.) Vol. I, fig. 58,59, pl. xiv; no. 72; p. 119.

29. Plate LXVIII, figs. 3,4.

It may be made of two separate pieces, fastened on either sides of the neck with straps running about the mane and below part of neck.

30

The chest-armour

It consists of a metallic plate moulded to the form of the animal's chest.³¹ The gardani, an armour of the horse is listed in the Ain. Abul Fazl has not given the description of it. Most probably, gardani was an armour of the neck, corresponding to the neck-armour mentioned above. Although it remains to be ascertained.

Armour of the elephant :

The illustrations give a detailed picture of elephant's armour,³² while in the Ain,³³ complete list of it is not given. Among these only the pakhar is described by Abul Fazl. It is made of steel plates and chains and consists of two parts : one covering the head and the other the trunk. Two varying shapes of the trunk's armour are displayed in the illustrations; one of which covers the full length of the trunk whereas the other, only the half of it.³⁴ Both these may be made with or without the head-plate. Pakhar is

30. Ibid; fig. 5.

31. Ain(Bloch.), Vol.I, no.75; p. 119. Irvine considers the gardani as a part of the Urtuk; (The army, p.72). Blochmann however distinguishes it and treats it separately as a round shield for protecting the front below the neck where it is hung; (Ain (Bloch.), Vol. I, p.119).

32. Ibid; p. 136.

33. Ibid; no. 21.

34. Plate LXXXVIII, figs. 9-13.

embellished by floral or geometrical motifs. A plate just below the forehead is decorated with a plumage made of the tail of the Tibetan-Yak. In addition, occasionally the head cover has two long ears of steel.

35

The armour which covers the back and belly of an elephant, resembles with the urtuk, the body-armour of the horse; though its name is yet to be ascertained. It is made of steel plates and chains, usually provided with a lace at the base - a decorative device.

Other defensive measures :

1. The Sabat :

The sabat is what may be called a moving fort. It is a high wall³⁶ designed like the walls of a fort with parapets and bastions. It is high enough to provide shelter to the army during attack on a fort. With the wall being moved closer and closer to the enemy's fort and the army safely entranced behind attack could be launched from a close range, until the gates were reached and broken down. According³⁷ to the Akbarnama, it was made of mud, was very wide and zig-zag of shape (Diwar-i-gilin-i-marpech). It may have been however of wood

35. Ibid; figs. 14, 15.

36. Plate LXXXVII, figs. 21, 22.

37. Akbarnamah (Lucknow edition), Vol. II, p. 114, line 6; and p. 245; line 11.

also, which at any rate would be more convenient to carry and lighter.
38

Rumikhan is reported to have erected a similar wall on boats.

2. The ladder :

Complementary to the moving fort is the ladder, a conventional means
39 40
used for scaling the walls of a fort. It is mentioned in the Baburnama
that the ladders were sometimes so wide that two to three men could
simultaneously climb it.

Mention may be made also of some auxiliaries which, may not be classi-
fied among the implements of war but could be used as such or in
connection of some other related function.

41
For instance, rocks and boulders were kept ready inside the forts
for rolling down over the enemy attempting to scale the walls of
the fort, or for throwing them like missiles from the parapets when
the soldiers approached within a close range. The Manjanig, a machine
42
employed for throwing heavy stones is shown engaged during the seige.

38. "Rūmikhān who was the paragon of the age for overcoming grant
forts and sky-high castles, and who had sultan Bahadur after the
victory of Mandasōr, and been enrolled as one of his Majesty's
servants, and exalted by the office Mir Ātash (Director of Ord-
nance) constructed a covered way (Sābāt) upon boats and arranged
such a roof (Sathā) with strong partitions(?) on the top of a
plateform of planks that the ingenious and skilful bit the finger
of astonishment in admiration of the workmanship". Akbarnama,
Vol. I; p. 331.

39. Tuzuk; f. 468b (B.M.); Tarikh; ff. 15a, 68a (Patna).

40. Baburnama, Vol. I; p. 143.

41. Tuzuk; f. 84a (B.M.).

42. Plate CXI, fig. 28.

The multipurpose rope was another such implement. Besides the various functions in which it must have been utilised as a tightening or⁴³ binding agent, it was also used for arresting a flying enemy. The rope was long and could be thrown like a sling upto some distance. At the end of it was a large noose with a slip-knot. The noose was skilfully thrown; and no sooner than the neck or the body of the man was trapped in it, a quick, and firm pull at the other end tightened it. A fugitive running on a horse back could be easily got down from behind by the rope.

For driving and controlling the elephant, an⁴⁴ ankus, the gad and the jagawat⁴⁶ were the only gadgets. The ankus is made like a large iron hook. The stem is like an arrow; but at the outer end of it there⁴⁷ is a hook. Akbar called it gajbaga. The elephants were trained to the goading of this implement. The gad is a spear having two prongs instead of an iron point. The prongs are curved like the stiff neck of a swan. A small peg having depression in the middle is attached horizontally with the spear head. Like the ankus, bhlis pierced the animal with the gad when he becomes refractory. In the folio 248 (Akb, C.B.) a few attendants, laced with the gad, are shown

43. Tuzuk; f. 285 (B.M.).

44. Ain (Bloch.), Vol. I, No. 27, p. 136.

45. Ibid; No. 28; p. 137.

46. Ibid; No. 30; p. 137.

47. Ain (Bloch.), Vol. I, p. 136 (No.27).

engaged in controlling an elephant. The last gadget is similar to the gad with the difference of prongs. A round peg having depression⁴⁸ in the middle, fixed horizontally to a small shaft - makes a jagawat. It is used to make the animal active and to quicken his speed (Ibid; f. 32b).

49

The Quoit; the chakra.

An ancient Indian weapon associated with Hindu Lord Krishna - is a⁵⁰ flat metallic ring having sharp outer-edge like a razor. Sanyasis made a use of it during their fights. It was not a weapon of the⁵¹ Mughal soldier. Abul Fazl has not mentioned it in the list of the weapons.

48. Ibid; p. 137 (no. 30).

49. Plate LXXXIV, fig. 26.

50. Akb. pls. 61, 62 (V.A.).

51. Ain (Bloch.). Vol. I, pp. 117-119.

(c) THE ENSIGNS OF ROYALTY

From times immemorial kings have used various ensigns symbolising supreme dignity, power and authority and distinguishing personages. Abul Fazl considers the fondness of the kings for external ¹ external splendour as a reason for the adoption of such symbols. The insignia ² that he mentions in the Ain belong to the court of Akbar but seem to have been perpetuated from earlier times. The Muslims added the emblems of sovereignty which included sun, tiger, ibex and a set of standards ending in golden disks, globes, heads of dragon, animal's head, spear head etc. etc. All of these have been depicted in the illustrations.

There are innumerable types of the Mughal emblems. The stylized head of bird with an elongated beak and a curved neck is typical. The geometric designs displaying circles, ellipse and symmetrical figures of the utensils etc. are common. Snake, dragon, and elephant, human head are, but less frequently found. The heads of animals : wild-goats, stags, tiger, horse, sheep and a dragon (symbol of heaven) - employed in the ornamentation of the thrones, boats and arms etc; are not merely decorative and have emblematic significance. The shades: viz. scarlet, orange, green or purple used in the cloth of standards and flags too, are of emblematic significance.

1. Ain (Bloch.); Vol. I, p. 52.

2. Ibid.



PLATE LXXXIX

Broadly speaking there were three categories of insignia: the royal insignia, the use of which was the special privilege of the king; the insignia bestowed upon princes or used by them as a matter of course; and the insignia granted to distinguish nobles in recognition of some special services or to symbolise their status. Some of these were used by routines while others were displayed on formal occasions. For all the insignia depicted in the illustrations we have to depend for terminology on what Abul Fazl has listed in the Ain.

The awrang: (LXXXIX & XC).

The awrang or the throne was the first insignia of royalty several kinds of these must have been used by the king. It seems that the largest was placed in the main hall or diwan where the king held his court. The others placed in smaller chambers used for special kinds of gatherings. The throne depicted in the camping scenes must have been specially made so as to be easily transported along with the rest of the paraphernalia. In Indian history we come across several such occasion when an intinerant prince was throned away from the capital on receiving the news of the sudden death of the king. On such emergencies humbler thrones must have been erected. Akbar too was confronted with such a situation an earthern throne was built for his first coronation at Kalanaur.³ In other instance, an earthern

3. On February 15, 1556.

throne was built for Babur by a river side where he held a court, although he was not confronted with the situation mentioned above.

The thrones depicted in the illustrations are necessarily the representation of those actually used by the emperor. The painters must have drawn the figures from their personal observation of the thrones used by Akbar, or from fancy. However, some characteristics are common to all which, we can safely presume, must have been traditional. The thrones used in the palaces for holding the grand court or for restricted audience consist of a square pavilion with roof supported by four thin cylindrical columns; the main seat; and generally a payadan⁵ or what may be called a stair for stepping up to the sitting place. Besides the Payadan, sometimes a stair was connected for stepping upto the seat, with the thrones supported on high legs. The seat is smaller in size and hexagonal in shape. Seats, square in shape⁶ are there but less frequently used. It is closed by a short railing all rounded, leaving some space on the front side for the king to pass.⁷ The back seat would be generally 4 to 5 feet high

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4. Tuzuk; f. 459 (B.M.).
 5. Ain (Bloch.); Vol. I, plate ix, p. 52.
 6. Razm; pls. 20, 30 (Baroda); pls. 31, 37, 38, 73, 79 (Jaipore); Tarikh; ff. 5b, 40b, 89b, 90a, 1181, 123a, 126b, 131b, 136b, 144b, 182a, 205b, 206b (C.B.); pls. 9, 27, 50, 52, 75, 79, 94, 114 (V.A.); Diwan; f. 19 (Rampur); Anwar; ff. 5, 134, 208 (Varanasi).
 7. Tarikh; ff. 40b, 284a (Patna).
 8. Razm; pl. 9 (Baroda); pls. 27, 68 (Jaipore); Anwar; ff. 5, 205 (Varanasi); Tarikh; ff. 62a, 90a, 254a (Patna); f. 201 (C.B.); pl. 23 (V.A.).
 9. Razm; 12, 37, 39, 79 (Jaipore); Tarikh; ff. 5b, 40b, 206b, 154a, 284a (Patna); Akb; f. 147b (C.B.).

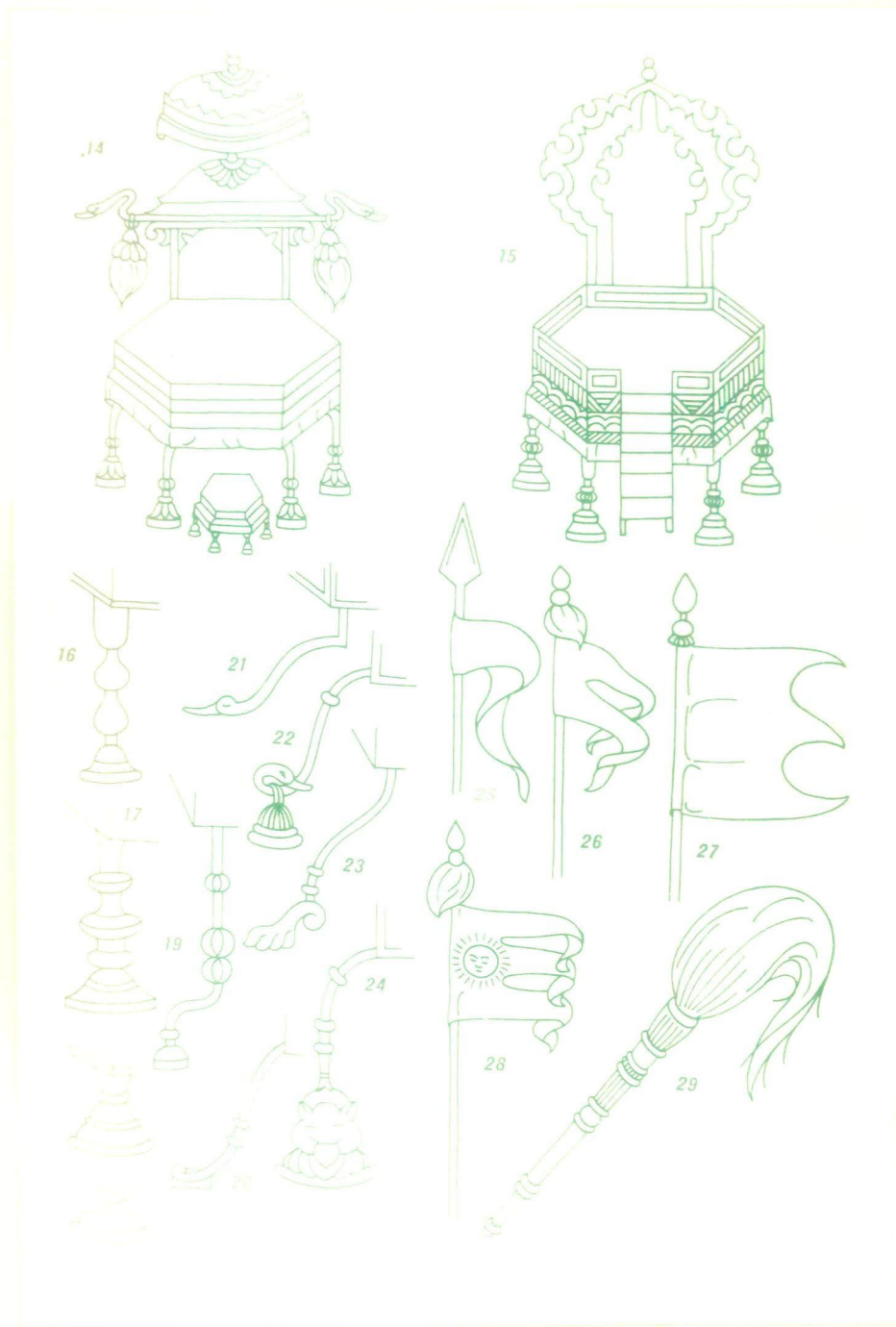


PLATE xc

and in the shape of a beetle leaf. Thrones used outdoors may be square or rectangular and without a pavilion. These would be either open overhead or covered by a shamyana.

Apart from these common characteristics, the thrones admitted considerable variety in the patterns of embellishment. For instance the edges of the back seat may be foliated or cusped like an arch.¹⁰ On the top it may be mounted a pinnacle of the shape of the flame, or the tall balas, or a bud, or a bird in stylised form; or two to three round spheres with an arrow head (figs. 10-13). Occasionally¹¹ royal-umbrella (chharta) is connected with the back seat. The legs are generally curved. A royal chair, a thakht - a seat made of planks may have short legs of the common shape composed of two or three spheres of varying sizes.¹² Other have high legs: curved or straight, ending in the animal's head - a cat, a tiger, a duck and sometimes the claw (panja) of a dragon (figs. 21-24).¹³ Rarely, we come across of a imperial throne without legs (fig. 7).¹⁴

The railings can be plain or intended like a parapet. These, as a

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10. Akb. ff. 1,6b(C.B.); pls. 9, 27, 50, 75, 79, 94(V.A.); Diwan; f. 19 (Rampur); Razm; pls. 39, 79, 86(Jaipore); Tarikh; ff. 40b, 104a, 118a, 123a, 131b, 136b, 144b, 182a, 205b, 206b, 284a, 328b(Patna).
 11. Razm; pl. 20(Baroda); pls. 12, 37, 39, 65(Jaipore); Tarikh; ff. 136b, 284a(Patna).
 12. Akb; f. 201b(C.B.); Razm; pls. 6, 26(Baroda); pls. 27, 68, 116 (Jaipore); Tarikh; ff. 90a, 148a, 254a (Patna).
 13. Akb; f. 49b;(C.B.); pls. 9, 27, 50, 75, 79(V.A.); Diwan; f. 19 (Rampur); Razm; pl. 86 (Jaipore); Tarikh; ff. 89b, 118a, 123b, 126b, 182a, 205b, 206b, 328b (Patna).
 14. Anwar; f. 5 (Varanasi).

matter of principle are not employed. Railings are frequently omitted in the embellishment of a throne. Imperial thrones used in the courts, furnished with a chhatra, lock of yak-tails on either sides of the back seat and ornamented, high legs; have no railings.¹⁵

The payadans are smaller in size, commonly rectangular in shape provided with short legs. Its top is covered with cushions and ornamented with floral patterns.

The external decoration was provided by profuse engravings and an abundance of precious stones, gold and silver chips all studded in beautiful patterns reminiscent of the costly Iranian carpets and of minute floral patterns of brocade of the medieval times. The seat was covered with thick cushions probably of velvet but profusely decorated by gold-thread work. The long round pillow (the gaw-takya of today) which too is done in elaborate decorative gold-thread work makes the rest for the back of the king.

The king is generally shown sitting on a throne with his forelegs folded underneath him. He is fully dressed and never without a crown. He is invariably attended by his nobles standing in two rows before him and by his personal attendants bearing the royal insignias

15. Akb; f. 147 (C.B.); pl. 50 (V.A.); Diwan; f. 19 (Rampur); Razm; pl. 20 (Baroda); pl. 73 (Jaipore).



PLATE xci

casually the chhatra but commonly the chanwar and alms. In all his paintings he is depicted engaged in state business, for instance meeting a prince-governor, examining the heads of enemies, issuing instructions or inspecting botty.

The thrones shown in the illustrations are conspicuous by two peculiarities. They are certainly not as ostentatious as more might except or the like of which are observed in the time of Shahjahan. Secondly they are of a size just enough for the king to sit comfortably. Auxiliary decorations are almost absent. Whatever embellishment is seen belongs to what are the essential parts that go to make a masnad.

The Chhatra; (plate XCI figs. 1-9).

The chhatra or the royal umbrella was second in importance only to the throne. It has in fact been a universal ensign of royalty. The monarchs of ancient India and the kings were called as Chhatrapati: One, to whom behoves a chhatra. Among the Muslims the practice of using the chhatra was quite old. In the christian world and among the Chinese too, the umbrella has been a symbol of the royalty. It seems to originate in the conception that a king is the representative of God on earth and the Chhatra was the symbol of devine

16. Razm; pl. 73(Jaipore); Tarikh; f. 136b (Patna).

17. Akb; f. 1,6b,49b,147b(C.B.); pls. 9,27,50,75,94,114(V.A.); Razm; pl. 9,20,30 (Baroda); pls. 39,73,79(Jaipore); Tarikh; ff. 5b,40b, 89b,90a,118a,123a,126b,131b,136b,144b,182a,205b,206b,284a,328b (Patna); Diwan; f. 19 (Rampur); Anwar; ff.5, 134, 208(Varanasi).

blessings, the expression of God's protective shadow on his head.

The prop of the chhatra is usually very long. It could be fixed to a throne or carried by an attendant close to the person of the king outside the palace or in a battle field. In the latter situation it served the purpose of providing the king with a covering against the sunlight. Its practical importance lay in its being visible to everyone from far and near, ensuring the presence of the king.

The chhatra depicted in the illustrations are all of the same form, with slight variations in the shapes of their domes and in decorative patterns. It is like a broad based, small dome with a pinnacle.

The base is girdled by a broad band and ornamented with the costliest jewels. A plait of cloth hangs loosely at the helm. The figure shown in the plate XCI; fig. 7 is characteristically similar from the one found in the Ain. The chhatra of Akbar is for more profusely decorated with gems and precious metals all over, but is of a simple

18. Akb; pls. 63,65(V.A.); Razm; 6,42,83,96,126 (attached to the chariot); Jaipore; Anwar; f. 32 (Varanasi); Tarikh; ff. 54a, 55b,57b,59b,67b,108b,147b,154b,170b,226a,227b,230a,253a,337b (Patna).

19. Akb; pl. 63,65(V.A.); Razm; pls. 6,37,39,73,83,96(Jaipore); Tarikh; ff. 48b,54a,55b,59b(Patna). Plate XCI; figs. 1-9.

20. "The chatr, or umbrella, is adorned with the most precious jewels, of which there are never less than seven". Ain(Bloch.); Vol. I, p. 52.

21. Ibid; plate IX, fig. 5.

shape. It has an circular rim with or without any appendage. The top surface is oval or circular or domed.

The Sayaban; (ibid; figs. 10-15).

The sayaban was also intended to provide shade and hence was also called Aftabgir. It had a long pole, ten to twelve feet in size. On the top of it was mounted a large fan, about a yard in length and ²² of the shape of a big leaf. The shape of the fan has varied. It may be egg-shaped, spherical or conical. It was bedecked with a number ²³ of jewels. An special attendant carried it with the emperor.

The Kawkaba; (ibid; figs. 16-20).

The Kawkaba is a decorative form of the Kawkab an Arabic word meaning a star. Abul Fazl does not give a sufficient description of this ensign but states simply that it was used to be placed outside the ²⁴ assembly hall. The lexicographers describe it as a polished ball ²⁵ probably of metal intended to announce the presence of the king at state business. The illustrations have atleast three of its repre- ²⁶ sentation. It is an spherical object suspended to a metallic hanger

22. "The Sāyabān is of an oval form, a yard in length, and its handle, like that of the umbrella, is covered with brocade and ornamented with precious stones". Ibid; Akb; ff. 1, 19, 22, 88 (C.B.) ; pls. 14, 15, 21a, 33, 41, 61, 77, 81, 83, 85, 97, 99, 110, 133 (V.A.) ; Tarikh; 12a, 26b, 32a, 48b, 322a, 323a (Patna).

23. Ibid, p. 52.

24. "The Kawkaba, of which several are hung up before the assembly hall". Ibid.

25. Steingass, p. 1063.

26. Plate XCI; figs. 16-18.

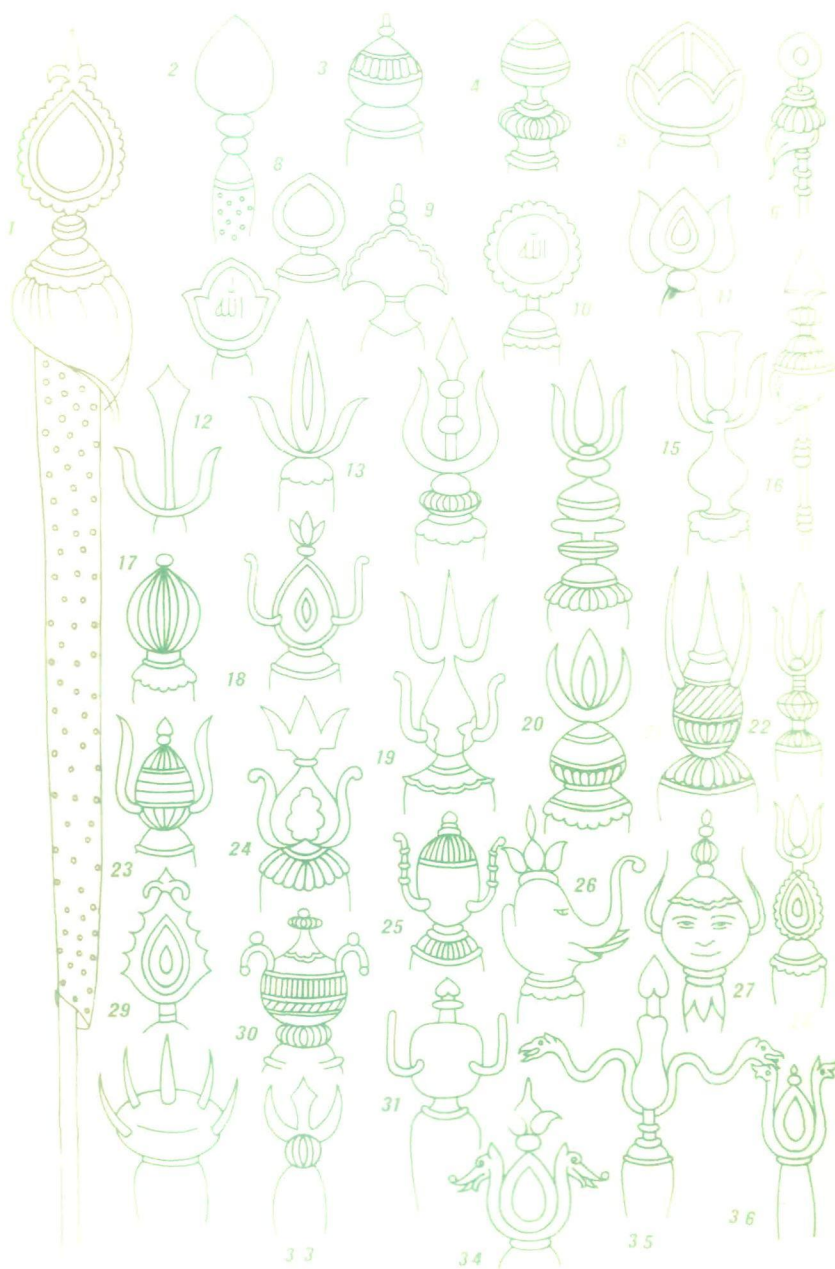


PLATE XCII

with a curved stem ending in the motif of the head of a dragon: a bird
 or a snake. There were stems meant to be fixed on the ground like
 a long lamp-post and there were other kinds, shorter ones permanently
 fixed the wall like a long peg. From the neck of the dragon this ball
 was hung. In one of the illustrations it appears like a solid ball
 with an inner core or a circle. In another it hangs just like a globe.
 In the third one it resembles a lotus bud with distinct markings of the
 petals. The question why it was called a Kawkaba is inexplicable
 in the light of these illustrations and of the description available
 in the Ain. It seems that it shone along with other ensigns of
 royalty on a battle field.

The Kawkaba, the sayaban, the chhatra and the throne were the ensigns
 which only the king had the privilege to use. Abul Fazl report on
 these seems to imply that the other insignia such as the alams,
chatratoo, tumantoo and the flag could be bestowed on the princes
 and nobles.

The alam; (plate XCII).

The alam is an Arabic word for standard which may be of any kind, a

27. Tarikh; f. 46b(Patna); Akb; pl. 65 (V.A.).

28. Tuzuk; f. 294 (B.M.).

29. Tuzuk; f. 306 (B.M.).

30. Akb; pl. 65(V.A.); Tarikh; f. 46b (Patna); Tuzuk; ff. 94,
 273 (B.M.).

31. Tuzuk; f. 294 (B.M.).

32. Ain (Bloch); Vol. I, p. 52.

flag or any other similar ensign. The alams of the Mughals are peculiar in their form though they vary from king to king. The alams³³ are displayed on occasions of festivity or war and seldom less than³⁴ five at a time. Special persons are assigned the responsibility of carrying them

With slight variations in the heads, the Akbari alams are all the same. Akbar, fond as was of innovation got his alams made in varying³⁵ designs and sizes and called them by different names too. A chat-ratoq is smaller than others. It has a round wavy crest for the head and four bunches of Yak-tails instead of one. The tumantog lacks the tail but is otherwise similar. What is properly called alam has a tall head resembling a flask with a long cylindrical neck and a trifoliated crest on the top of it.

The alams displayed in the illustrations are generally flat in two dimentons with the suggestion of plastic relief. The distinctions made by Abul Fazl in the Ain, are not strictly followed by the painters. Alams depicted, are similar in their decore and embellish-³⁶ment with the variations of their heads. A thick lock of the Yak-tail

33. Razm; pls. 46,61,63,65,72,90,95,96(Jaipore); Tarikh; ff. 18b, 23b,24b,26b,44b,46b,63b,67b,73b,99a,149b,170b,194b,202a,226a, 227b,230a(Patna); Diwan; f. 355(Rampur); Anwar; f.32 (Varanasi); Akb; ff. 19,123,187b,226b(C.B.); pls.10,12,15,17,25,35,36,42,61, 63,65,77,99,100,103,108,109,110,116(V.A.).

34. "When the king rides out, no less than five of these are carried along with the qūr, wrapped up in scarlet cloth bags". Ain (Bloch.); Vol. I, p. 52.

35. Ibid.

36. Plate XCII; Razm; pls. 72,86,96,112,115,127(Jaipore); Tarikh; ff. 18b,23b,24b,26b,44b,63b,73b (Patna); Akb; pls. 12,15,17 (V.A.).

may or may not be attached, below the emblem. Costly cloth of varying shades: green, purple, orange, red and blue etc; embellished with ³⁷ floral motifs is wrapped around the poles. A few are without cloth.

The emblems are designed in the traditional form of floral motifs, stylised human or animal heads, or a dragon or forms of utensils similar to the minas-provided with two spouts. The conical, round or oval-shaped heads with foliated edges may be mounted with trifoliated crest on the top of it. A pinnacle or spear head with one or three prongs may be employed as an emblem or attached at the top of other floral motifs of the head. Symmetry, as a matter of rule is followed in their forms.

³⁸

The head of an elephant embellished with a crown (symbol of Ganesh - the Hindu god) seems the emblem of ancient India, being adopted by ³⁹ the Mughals (fig. 26). The emblem designed with the heads of dragon (symbol of heaven) shows its affinity with Chinese tradition (figs. ⁴⁰ 34, 35). The human face, probably the sun, employed as an emblem is a Persian tradition (fig. 27). Occasionally, an inscription of ⁴¹ 'Allah' appears on the flat surface of the alam's head identical to the Islamic-World (figs. 7,10).

37. Akb; f.18(C.B.); pls. 21,31,77(V.A.); Razm; pls. 63,72,117,126 (Jaipore).

38. Tarikh; f. 67b (Patna).

39. Tarikh; f. 48b (Patna).

40. Akb; f. 226b (C.B.).

41. Akb; f. 187b (C.B.); pl. 12(V.A.); Tarikh; ff. 24b, 48b, 238a (Patna).

The flag; (plate XC figs. 25-28).

Akbar's flag is very simple. Generally, it is made of long, triangular cloth but is not very broad. Flags made of broad cloth are trifurcated and short in length. As a matter of course, no emblem⁴² appears on them. The emblem of a shining sun rarely comes to our view (fig. 28). It is similar to that displayed in the plate IX,⁴³ fig. 1 (Ain, Bloch.). Abul Fazl has mentioned that the Shamsas - pictures of the sun affixed on the gates or on the walls of the palaces, were illuminated in the night. The stem of the flags ended in a spear head from which occasionally hung tufts of Yak-tail.

⁴⁴
The chanwar; or camari; or cauri; (plate XC fig. 29).

A typically oriental sign of dignity shone in the illustrations is the chanwar, literary the fly-whisk. Its handle is generally well decorated and the fluff of the hair very thick. The attendant carrying the chanwar stood close to the king and waved it in gentle movements about the king's head. It was frequently used in and⁴⁵ outside the court.

42. Akb; f. 188 (C.B.).

43. Ain (Bloch.); Vol. I, p. 52.

44. Encyclopedia of World Art; Vol. IV, p. 720.

45. Razm; pls. 6,9,10,20,26,28,30 (Baroda); pls. 12,37,73,86 (Jaipore); Akb; ff. 1,4b,49b,54,157b,268b (C.B.).

(d) MUSICAL - INSTRUMENTS

Music has been a necessary accompaniment of court life. It has been one of the chief sources of entertainment for the royalty as well as a source of inspiration in the battles. The Mughal court has been famous for the uplift of Musical art in India and kings have been patrons of some of the greatest Indian musicians. Both vocal and instrumental music was cultivated under the patronage of Akbar. The emperor paid his attention to music and patronised the musicians.¹ Abul Fazl has given thirty-six names of the principal musicians in the Ain.² No doubt, there would have been a greater number of them. Among the musicians there are both the men and women, who belonged to different origins: Hindus; Iranis; Turanis; and Kashmiris. On the order of the emperor musicians played their instruments daily. Their, seven divisions were made to facilitate the work. These divisions performed alternately, once a week.³ Dhurpad, reached to its zenith at the court of Akbar when Tansen sang it.⁴ Instruments

1. Ain (Bloch.); Vol. I, p. 681.

2. Ibid; (Miyan Tansen; Baba Ramdas; Subhan Khan; Srighyan Khan; Bir Mandal Khan; Baz Bahadur; Miyan Chand; Bichitra Khan, Muhammad Khan; Shihabkhan; Daud Dhari; Sarod Khan, Miyan Lal, Tantarang Khan s/o Miyan Tansen; Mulla Ishaq Dhari; Usta Dost; Nank Jarju; Purbin Kumar; Surdas s/o Baba Ramdas; Chand Khan; Rangsen; Shaykh Dawan Dhari; Rahmat-ullah s/o Mulla Ishaq; Mir Sayyid Ali of Mashhad; Usta Yusuf; Qasim Kohbar; Tash Beg; Sultan Hafiz Hashim; Usta Shah Muhammad; Usta Muhammad Amin; Hafiz Khawaja Ali; Pirzada and Usta Muhammad Husyan.7; pp. 681-682.

3. Ibid; p. 681.

4. Arts and Crafts of India & Pakistan; pp. 11-12.

too, found an important place. Abul Fazl has described a variety⁵ of these instruments, a few of which were the innovations of the⁶ musicians of the Mughal court. Qasim Kohbar invented an instrument intermediary the Qubuz and the rubab.

A scene depicting wholly a musical function is wanting in the collection of the Akbari-illustrations. It is only in the connection of a feast or a festival that musicians appear giving their performance. Their representation is linked to a number of rites and ceremonies. For that reason only a few of the musical-instruments used in those⁷ days come to our view. Musical tradition of Akbar's court display strong affiliation with the Persian music. The instruments are the same as were common in Iran, and the names of which we come across so frequently in the odes of Hafiz, Jami and Firdausi. The rubab is the most prominent of them. Then comes the ney or the flute and the nafir, the portotype of modern nafiri. Among the percussion instruments there are the duhul (Indianised as dhol); the chang and daf. Included among them are the damama, which is the largest drum used for announcing the commencement of war, the nagqara or the small kettle-drum, the qarna and surna. Besides these other instruments are displayed as an accompaniment of dance. The ghungru, sanj

5. Ain (Bloch.) Vol.I, pp.52-53; (Nagqara; Damama; Duhul, Surna; Qarna; seeng; Nafir and Sanj); pp. 681-682; (Sarmandal; Bin; Nay; Ghichak; Tambura; Qubuz; Rubab and Qanun).

6. "Qasim, surnamed Koh-bar. He has invented an instrument intermediate between the Qubuz and the Rubab". p. 682.

7. Plates XCIII - XCVIII.

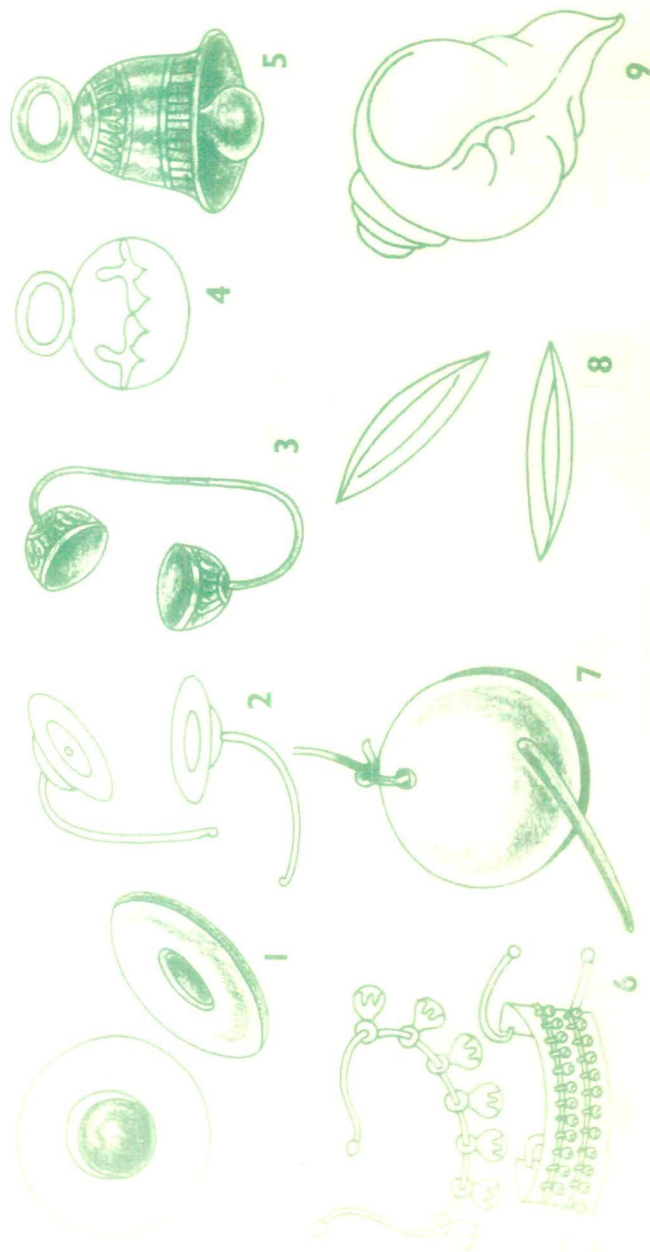


PLATE XCIII

(jalra), tala (manjira); mirdanga, veena, tambura and dundubhi are typically Indian and seem to have won their way into the Muslim court long before the advent of Mughals, by virtue of their intensely rhythmic quality. Veena, flute and mirdanga etc. played on by ⁸ god and goddesses can be seen in the fresco-paintings of Ajanta. These instruments are still in use in their purest form.

(a) Idiophones :

Cymbals :

1. The Sanj; (plate xciii; fig. 1).

This is similar to what is called in Hindi as Jhanjh. It consists of two separate pieces of plates about 10 inches in diameter. In the middle of each plate and leaving a broad margin there are cup shaped depressions. In the centres of these cups are holes from which run out two small pieces of string knotted on either sides. Each of the plates is held in either hands by the strings. The concave sides ⁹ of the plates are the inner surfaces which are struck together. The jingling sound becomes louder because of the vibration produced in the helms of the plates. The cups act as resonants for the sound. The rhythm of the sanj is very simple as this instrument is not so

8. Cave xvii, Ajanta, Arts and Crafts of India & Pakistan; Plates xiii, xxxv.

9. Akb; ff. 19, 157b, 187b (C.B.); Razm; pls. 43, 53, 72, 83, 87, 88, 89, 108, 110, 127, 145 (Jaipore); Tarikh; ff. 40b, 54a, 57b, 136b, 202a, 226a, 227b, 230a, 238a, 254a (Patna).

comfortable to wield as the manjeera or the tala. In effect the sanj resembles the cymbal now used in western Orchestra occasionally punctuating musical phrases.

2. The tala; or the manjeera; (ibid; figs. 2, 3).

It consisted a pair of two separate cup shaped pots. In the centres of these cups run out on small piece of string knotted on either ends. The depth of the cup has varied. Its another form could be like a saucer with cup shaped depression in the middle. It is an instrument of indefinite pitch and is played by striking the edges of these vessels or ^Ubbing the flat margins of the saucers. The tala is not new to the students of Indian music and dance. It was common accompaniment of bhajans in the temples. It marked the rhythm of the both: dance or vocal recital.

Bells :

1. Gong; (ibid; fig. 7).

Like the tala this instrument too, won its way in the music of bhajans and various ceremonies. It is always played in the accompaniment of other musical instruments such as tala, mirdanga and dhol etc. etc. It is a flat, round, metallic disk provided with a loop at the top in the middle through which a string is passed to hold it. The sound is produced by striking it with a wooden-stick.

10. Akb; pl. 79 (V.A.); Razm; pl. 127 (Jaipore).

11. Razm; pls. 72, 121 (Jaipore).

2. The ghungru; (plate XCIII; Tarikh, f. 40b Patna).

Ghungru is an essential accompaniment of Indian dancer. Several hollow balls of brass with small metallic grains inside them are strung together into two or three rows on a leather or cotton flap on a length enough to cover the ankle make up the ghungru. The balls are each called a ghungru after which the whole instrument is known. The ghungru is tied by a hook or flap or by strings just above the ankles (Akb; f. 143 (C.B.)). There is always a pair of them worn in each leg. During the dance the ghungrus produce a jungling sound at each step or movement of the foot. The sound is dull so that it is not sustained longer like the sound of a bell. So that every individual beat is distinctly heard and marked. It has a very pleasing effect. In the latter medieval period the use of the ghungru became a difficult art with the growth and development of Kathak style of dancing. Intricate patterns are weaved by the feet which produce¹² equally intricate rhythmic ghungru sounds. Metallic-bells of varying sizes in different shapes; hemi-spherical, cup-shaped, and round, are employed in the ornamentation to decorate the harness of elephants¹³ and camels etc. Round bells are tucked in a row on a long, narrow strip of cloth or leather, fastened round the neck of the animal.

12. Plate XCIII; figs. 4, 5.

13. Tarikh; ff. 24a, 65b, 104a, 110b, 132a, 143b, 147, 170b, 248a, 269a (Patna); Razm; pls. 7, 29, 32 (Baroda); pls. 39, 46, 53, 54, 58, 72, 90, 96, 100, 102, 103, 104, 106, 115 (Jaipore).

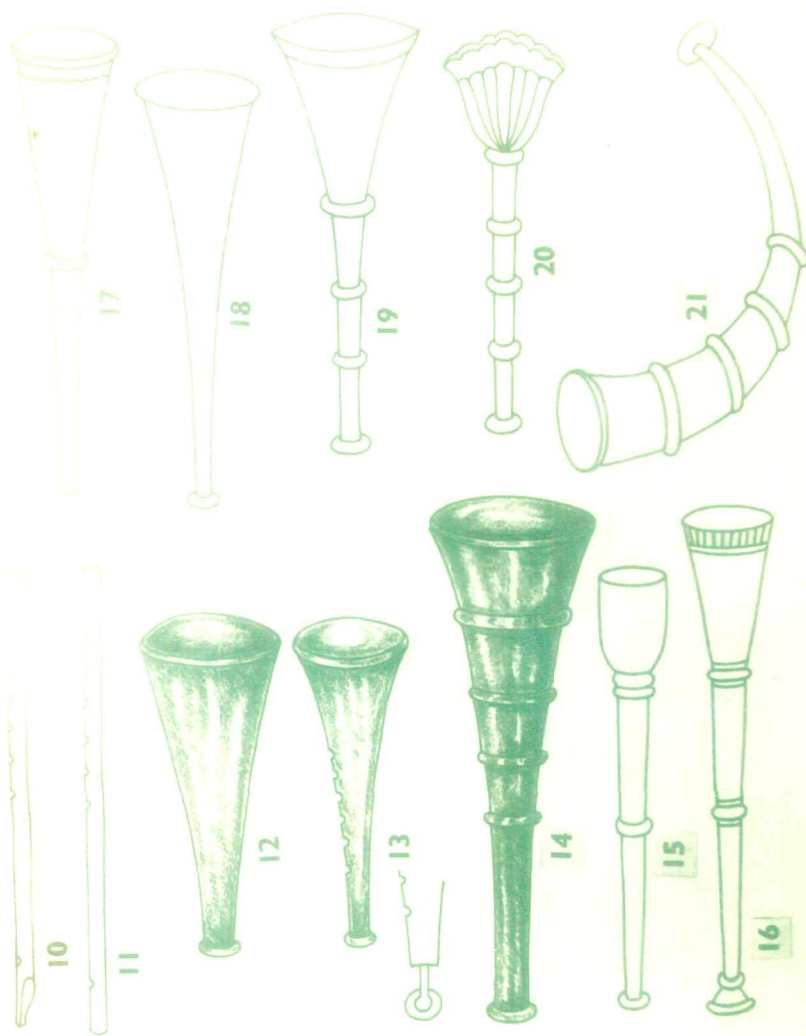


PLATE xciv

Wood-blocks :

1. Castanets; (Ibid; fig. 8).

It is a musical instrument of indefinite pitch, consisting of two shell
14
shaped pieces of hard wood about as long as the palm. These are rattled
between the thumb and fingers of the dancer's hand, who could have one
or two sets in both palms at a time. The inner flat surfaces of these
two pieces are struck together marking the rhythm of the dance and
vocal recital. Both male and female dancers played them.

(b) Aerophones :

Flute like instruments :

- (1) Surnai-Hindi (a vertical-flute); (2) Ban-Suri (a cross-flute);
(plate XCIV; fig. 10, 11).

The word Surnai-Hindi is given by Abul Fazl to the flute. Indian musi-
15
cians differentiate between the bansuri and the alghoza. The former
16
has six holes of musical notes and another hole at a certain distance,
nearer the upper end which is closed by a stopper shoved into it.
This is held side ways and is blown at the hole nearer the end. The
17
alghoza is held in the front instead of a hole it has a pen's-nib like

-
14. Akb; pls. 8, 79 (V.A.); f. 143b(C.B.); Tarikh; ff. 4b,40b,72a,
205a, 284a (Patna); Razm; pl. 121 (Jaipore).
15. Ain (Bloch.); Vol. I, plate viii, fig. 7.
16. Razm; pl. 134 (Jaipore).
17. Akb; pl. 79(V.A.); f. 143b (C.B.); Tarikh; ff. 4b, 90a(Patna);
Razm; pl. 12 (Jaipore).

projection with a narrow aperture. The mouth of the alhoza is held between the lips. The breath blown through the aperture passes through an almost square hole at a little distance and produces the sound. The length of this instrument has varied. Alhoza could be ¹⁸ one span long.

Musical patterns are contrived by the co-ordination of the breath with the movements of fingers (the three middle fingers of each hand—those of the right hand being below those of the left). The hole near the lower end is the lowest note and is followed upwards by the next in succession to the sixth note. A particular note becomes alive with the raising of the finger from the corresponding hole. While the fingers on the upper holes remain closed. A seventh note is produced by closing all the holes. The instrument in fact has two octaves. The upper octave is manipulated in the same manner as the lower one but here the strength of the breath is doubled.

The flute has an extremely amorous sound. Its association with the Hindu god Krishna and its simplicity accounts for its popularity among the Indian people.

Lip blown instruments :

- (1) The Surna and (2) the nafir; (ibid; figs. 12,13).

18. Cyclopedia of India; Vol. III, p. 441.

19
 Abul Fazl has mentioned the sirna and the nafir as two separate ins-
 20 truments. The picture of these instruments given in the illustrations 21
 help us to differentiate between the sirna and the nafir. The former
 has small holes on the stem and is played like the flute. The nafiri
 of the modern time seems to have retained its form from the nafir.
 These are long tapering instruments, a pipe opening in the form of a
 funnel. From Abul Fazl description however it appears that sirna was
 more popular in the court as a part of the whole royal band than the
 22 nafir. He mentions that in the naqqarkhana nine sirnas were played
 23 at one time. The sirna and nafir both accompanied the naqqarkhana.
 However, the latter seems associated, mostly with the instruments
 performed at festivities etc.

24
 Abul Fazl also distinguishes the Hindi-sirna from the Persian sirna.
 This evidently refers to the distinction between the Persian sirna
 and the bansuri or the alghoza. Three kinds of nafir are mentioned,
 25 Indian, Persian and European. We have a few paintings depicting this
 instrument. Abul Fazl does not clarify the distinction, and it is
 difficult to guess their relative differences and merits.

19. Ain (Bloch.); Vol. I, p. 53, line 4-6.

20. Plate XCIV; figs. 12, 13.

21. Akb; pls. 8, 79(V.A.); ff. 19, 143b(C.B.); Razm; pls. 83, 87, 89, 108, 110, 119, 145(Jaipore); Tarikh; ff. 20a, 24b, 67b, 136b, 205a, 253a, 254a, 284a(Patna).

22. Ain, (Bloch.); Vol. I, pp. 53-54.

23. Ibid; p. 53, line 3-4.

24. Ibid; plate VII, fig. 6, 7.

25. Ibid; p. 53, line 5.

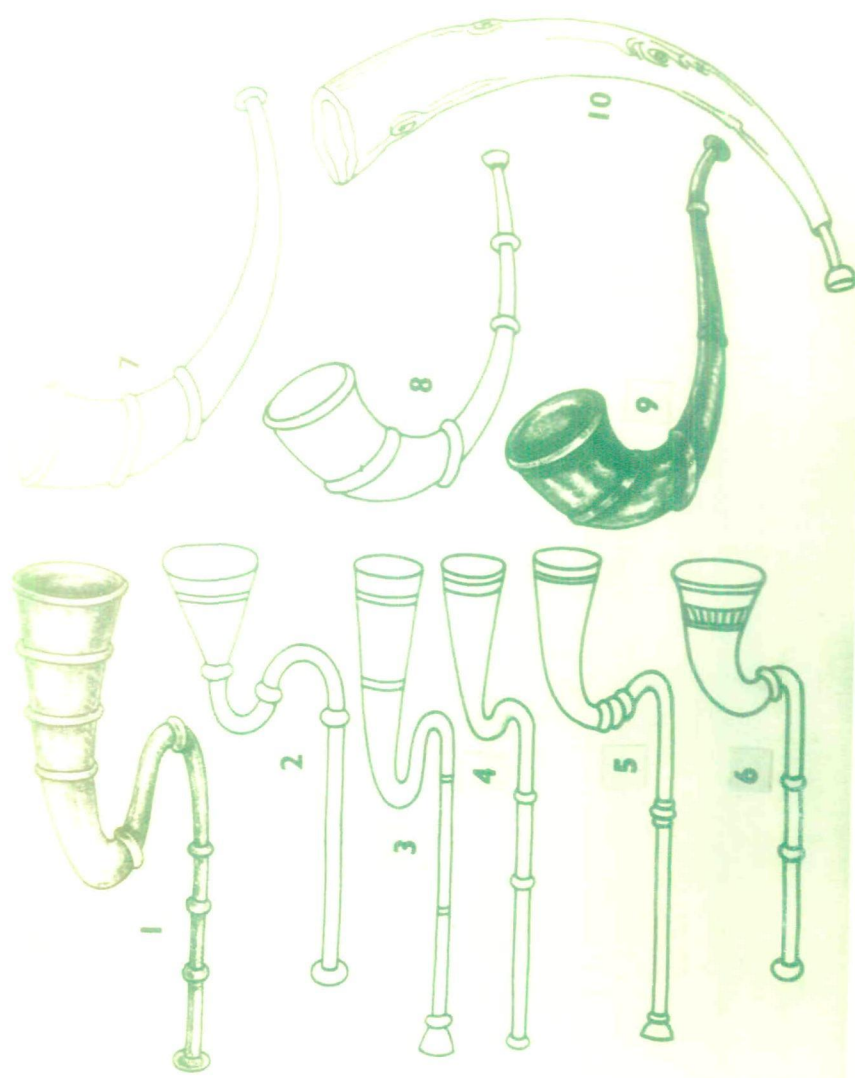


PLATE xcv

3. The Qarna; (plate XCIV and XCV).

The Qarna is the longest of the pipes. It could be twelve feet long.²⁶ It is of three types - straight, curved like the one third arch of a large circle and doubly curved like an S with elongated arms.²⁷ Qarna is a typical battle-field instrument. There are no holes on it and is played like a bugle. The lower end is a thin pipe with a small cup-shaped opening to fit the lips. The upper arm is an elongated funnel.²⁸ According to the Ain the Qarna was made either of brass, or silver, or even gold.

4. The seeng ; (plate XCV; figs. 7-9).

It is also used on the battle-fields. It was made of brass and acquired its name from the its shape which resembles the smoothly curved horn of a cow.²⁹ In fact it seems that the original Indian instrument of which the seeng is a refined copy must have been made out of the very horn of the cow. The kind of which may still be observed in the villages specially on the hills. The seeng also does not have any holes in it.

26. Cyclopedia of India, Vol. III, p. 441.

27. Akb; ff. 143b, 157b, 187b (C.B.); pls. 8, 79 (V.A.); Razm; pls. 43, 50, 53, 69, 72, 83, 87, 89, 110, 117, 121, 127 (Jaipore); Tarikh; ff. 15a, 23b, 40b, 48b, 54a, 57b, 65b, 67b, 170b, 178b, 196b, 202a, 226a, 230a, 238a, 253a, 254a, 254a, 323a (Patna).

28. "The Karnā is made of gold, silver, brass and other metals, and other metals, and they blow fewer than four". Ain (Bloch.); Vol. I, p. 53, line 2-4.

29. Plate X XCV; figs. 7-9; Razm; pls. 72, 88, 89 (Jaipore).

30. "The Sing is of brass and made in the form of a cow's horn, they blow two together". Ain (Bloch.); Vol. I, p. 53, line 6-7.

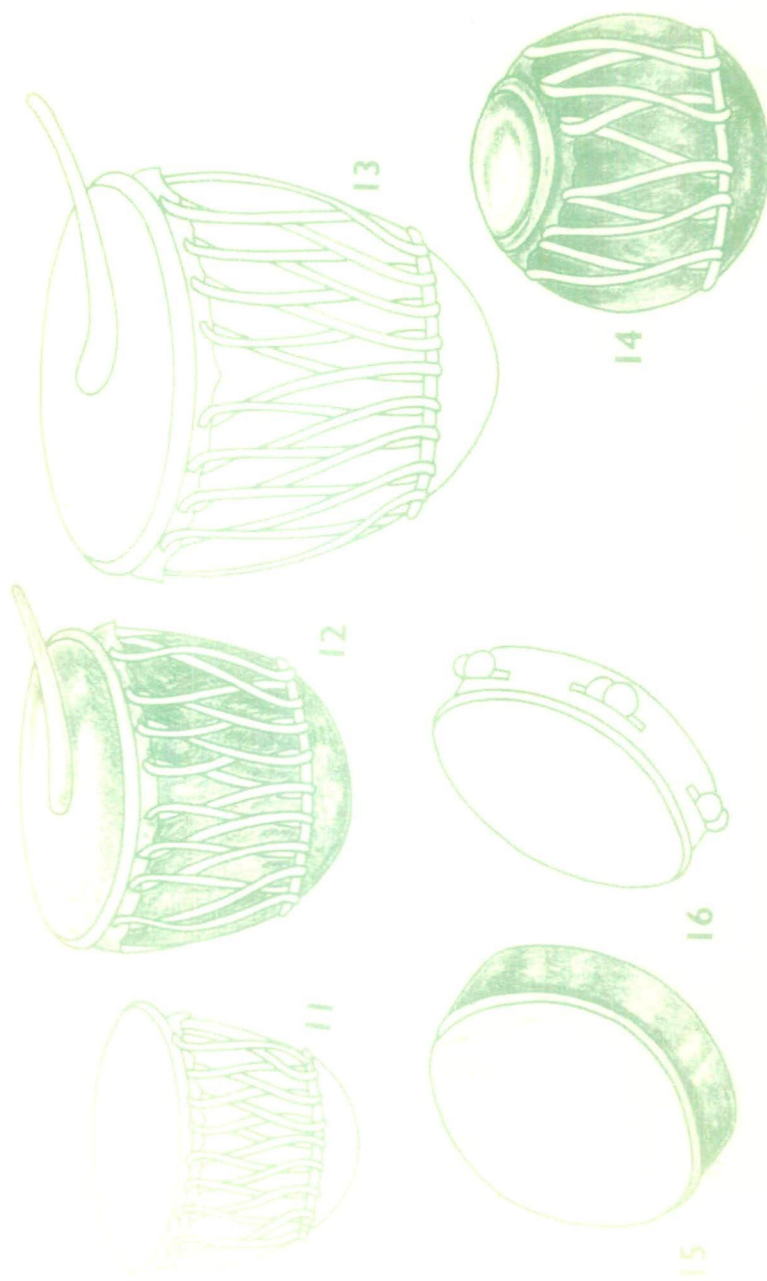


PLATE xcvi

A primitive form of the seeng comprising of a hollow, long wood piece curved like a horn is rarely represented in the Razmnama manuscript of Baroda. The lower end of this instrument is a thin pipe with a small cup-shaped opening to fit the lips. It is played like a bugle.

(c) Membranophones :

Kettle drums

(1) Naqqara; (plate XCVI, figs. 11,12,14).

The naqqara is a one surface drum and larger in size about one and a half feet to one and three quarters of a feet. It drum is like a big bowl almost round or rather half ellipse. In latter times we come across of naqqaras of bigger sizes also. But the naqqara used in musical performances do not seem to have been larger. These are played singly or doubly by one person. It was always beaten with sticks. These could also be ladden on horse backs or on camels and carried to hunting grounds where it seemed to drive animals into traps.

(2) The damama (ibid; fig. 13).

The largest drum was called damama. It varied from the naqqara only in size. It could be as high as five feet and correspondingly broad

31. Razm; pl. 30 (Baroda).

32. Anwar; f. 190 (Varanasi); Akb; pl. 79 (V.A.); ff. 10b, 19, 143b (C.B.); Razm; pls. 43, 53, 54, 60, 82, 90, 110, 117, 126, 144, 145 (Jaipore); Tarikh; ff. 15a, 23b, 24b, 26b, 40b, 44b, 46, 48b, 54a, 57b, 63b, 65b, 67b, 104a, 108b, 110b, 136b, 147b, 154b, 170b, 178b, 193a, 194b, 196b, 202a, 205b, 254a, 284a (Patna).

33. Tuzuk, f. 284 (B.M.).

at the surface. It was beaten by one man only with two large, thick³⁴ sticks. The damama could hardly be called the instrument of rhythm although rhythm there was possible. Nevertheless its function arose from its audibility during battles or from distances. For that reason it was an indispensable part of campare-phernalia. It seems that the damama was also used regularly for announcing certain fixed hours as well as some important routines of the king.

Frame drums :

- (1) The daf; (a tamborine); (ibid; fig. 15).

Daf is a one side drum, made like a sieve one side of which is covered with skin. The performer holds it by the wooden frame and³⁵ beats with the fingers of the other hand.

- (2) The Chang : (ibid; fig. 16).

³⁶
This instrument resembles the Arabian daf in shape but has in addition small, round metallic disks hung around its circumference. These disks tinkle with the movements of fingers and the hand provide rhythm to the dance. The dancer herself or a companion holds it³⁷ by the wooden frame and beats with the fingers of the other hand,

34. Plate XCVI; figs. 11,12,14; Akb; f. 187b (C.B.).

35. Tarikh; ff. 20a, 254, 284a.

36. Steingass; p. 528.

37. Akb; ff. 54,147b(C.B.); pls. 8,79(V.A.); Anwar; ff. 5, 208 (Varanasi); Diwan; ff. 30,116,247(Rampur); Tarikh; 4b,40b, 72a, 90a, 132a, 205a (Patna).

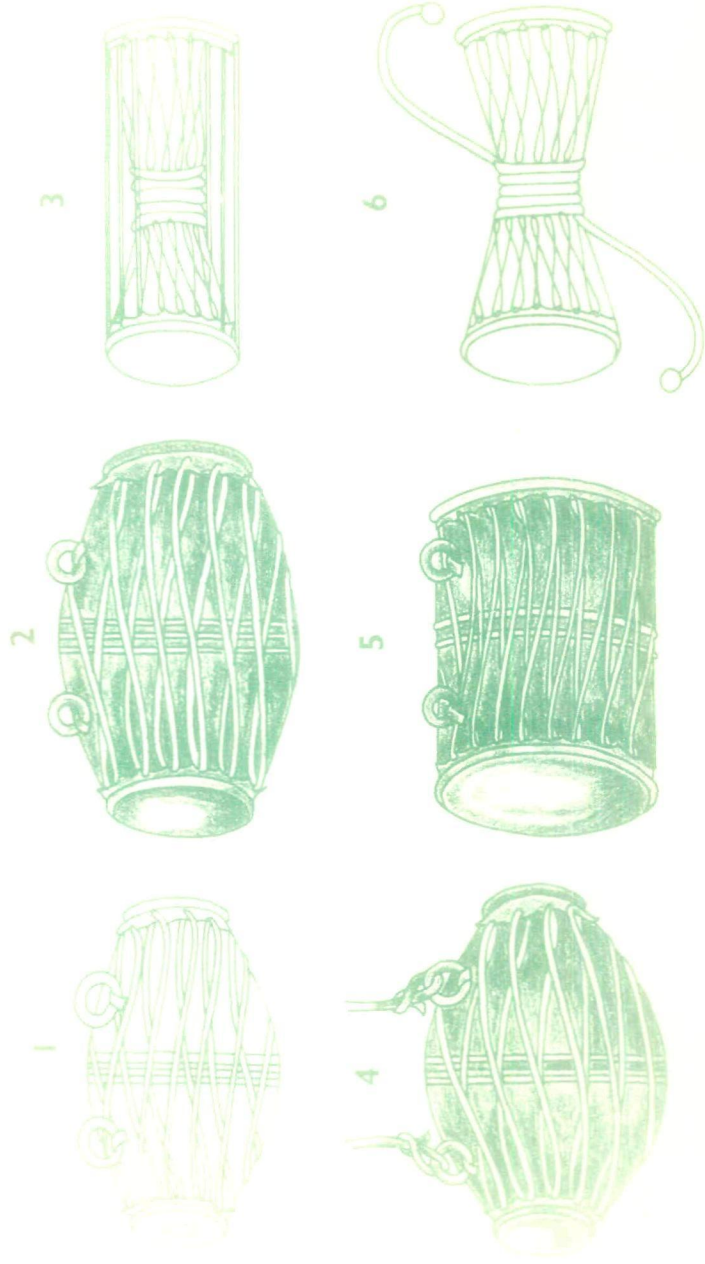


PLATE XCVII

occasionally shaking the instrument briskly to the rhythm of the dance. The Chang was the popular accompaniment of folk music and dance in Iran and still continues to hold its place.

Tablar drums :

(1) The dubul; (plate XCVII; fig. 5).

38

The dubul is very much like the dholak of our days. A nearly elliptical drum is covered on either sides with skin, with edges swen with gut or leather lace interwoven in the form of a rope and tied like a loop about the ends of the drum. Through these loops runs a long string or rope connecting the skins on either sides by alternate loops. When these loops are pulled the leather loop lace slide upwards more tightly about the tapering surface of the drum and the skin being stretched simultaneously become more tense. When the instrument is not used the strings are loosened in the order to preserve the skin from wear and tear on account of continuous tension. The dubul is played upon with two sticks in either hands or by fingers alone.

39

A dhol, very similar to the dholak of modern time is represented in the manuscript of Rajmnama (Jaipore). It is played in the accompaniment of other musical instruments to mark the rhythm of a dance or vocal recital. The dhol is played upon with two sticks in either hands.

38. Anwar; f. 190 (Varanasi); Akb; pl. 8 (V.A.); f. 143b (C.B.); Tarikh; f. 70b (Patna).

39. Razm; pl. 72 (Jaipore).

(2) Mirdanga; (*ibid*; figs. 1,4).

It is the most ancient percussion instrument. It is said to have been created by Brahma to serve as an accompaniment of the dance of Shiva.

⁴⁰
Mirdanga is a shallow bass drum made on the same principle as the duhul and is played upon with both hands at either ends. It is an accompaniment of the Kunchee-ka-tefa. Two of its forms are represented in the miniatures.⁴¹

(3) Dundubhi ; (Hourglass drum); (*ibid*; fig. 3).

The dundubhi, a musical instrument of indefinite pitch, is played upon with palm and fingers in the accompaniment of other instruments⁴² during the festivities. It consisted two small bowls-nearly hemispherical in shape, joined at their bottom, facing opposite to one another. Both the parchment heads are made on the same principle as the duhul or mirdanga etc.

⁴³ ⁴⁴
(4) The damru; or budbudika; (*ibid*; fig.6).

It is smaller in size than the dundubhi and is made on the same principle as the latter. It is an old instrument and is associated

40. Razm; pls. 89,121,127(Jaipore).

41. Plate XCVII; figs. 1,4; Razm; pl. 12 (Jaipore).

42. Akb; pl. 79 (V.A.).

43. Razm; pl. 41 (Jaipore); Plate XCVII; fig. 6.

44. Arts and Crafts of India and Pakistan; plate XLIV.

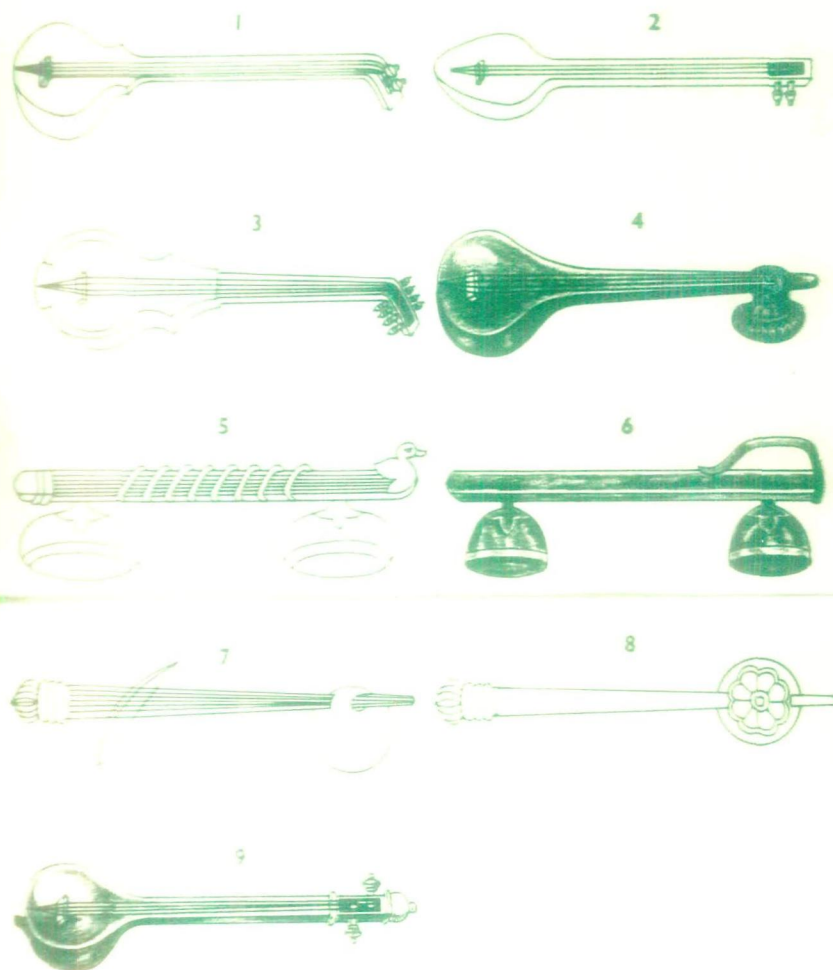


PLATE XCVIII

with the Hindu god Shiva. The performer holded it in the middle and shaken transversely. The strings provided with round knobs at their ends striken the parchment heads and produced the sound.

(d) Chordophones :

Lutes :

(1) The rubab; (plate XCVIII; figs. 1,2,3).

45

It is four stringed instrument somewhat resembling the modern mendolin.

According to Babur it was made from the larger shells of coconut

46

fruit, two which was attached the neck. The coconut shell was chopped

into a large bowl and the opening was covered with parchment. Unlike

the mendoline the neck is not graduated. It was played with a plec-

trum held in the right hand while the fingers of the left hand moved

47

along the strings like on the violin. Its neck could be straight or

48

moulded down at the end.

49

50

(2) The Veena; or bin; or bin-sitar; (Ibid; figs. 5,6).

It is one of the oldest string instrument of India. Its ancient

51

form is not altered. It is stringed with five or seven steel wires.

45. Steingass, p. 567.

46. "Its fruit is the Hindi-nut from which black spoons(qarā qāshūq) are made and the larger ones of which serve for guitar bodies. "Baburnama; Vol. II, p. 504, line 14-16.

47. Anwar; f. 5 (Varanasi); Akb; pls. 9,11,117(V.A.); ff.54,57(C.B.); Diwan; ff.30,314(Rampur); Razm; pls. 12,118(Jaipore); Tarikh; 20a, 40b, 90a, 254a (Patna).

48. Ibid; plate XCVIII; figs. 1-3.

49. Ain (Bloch.) ; Vol. I, p.682.

50. Music of India, p. 682.

51. Cyclopedia of India; Vol. III, p.442; Collieris Encyclopedia; Vol. X, p. 71.

The instrument consisted a long, narrow body and gourd resonators at either ends. Both the male and female musicians played it in the accompaniment of other instruments.

(3) The Kamancha; (ibid; figs. 7,8).

The Kamancha provided with three or five strings, is played with a bow. It has a long neck gradually tapering towards the lower end where a small gourd resonator is connected to concentrate the sound. The performer holded it vertically.

(4) The tambura; (ibid; fig. 9).

The tambura too, is an old instrument like the veena. The classical vocalists used it. It has catgut strings instead of wire played with a bow. Its long, narrow neck is connected to a bowl shaped gourd resonator-the opening covered with parchment unlike the mendolin, rubab etc. The neck is not graduated.

Plate 127 of the Razmnama manuscript (Jaipore) has represented a typical stringed instrument, the name of which is to be ascertained. It has strongly resembled the rubab. It is handled and played with

52. Akb; pls. 21,23,50,75(V.A.); f. 143b(C.B.); Tarikh; pls. 4b, 76b(Patna); Razm; pls. 12,118 (Jaipore).

53.

54. Akb; f. 147b (C.B.).

55. Cyclopedia of India; Vol. III; p. 441.

56. Tarikh; 4b,40b,(Patna).

57. Plate XCVIII; fig. 4;(This typical musical instrument, combination of the two; Rubab and Qubuz; is probably the same-invented by Qasim Kohbar. Ain (Bloch.); Vol. I, p.682).

a plectrum like the latter. An extra, small gourd resonator connected at the upper end—most probably to produce the high pitch, seems the innovation of some musician.

The instruments cited above are just a few of the instruments which were used in India those times. Besides a few these were typically court instruments. The dilruba, sarangi, ektara of jogis, the snake charmers mahuwari, sarmandal, ghichak, qubuz and many more such instruments do not occur in the illustrations.

The naggarkhana was an important establishment of the Mughal Kings. Akbar seems to have expanded both its composition and its functions. Abul Fazl writes in detail the various signature items as well as the ragas and ragnis which pentuated the daily routine of the court life.

58. Ain (Bloch.); Vol. I. p.681.

59. Ibid; p. 682.

60. Ibid.

61. "After this they go through the following seven performances.

1. The mursali, which is the name of a time played by the mursil; and afterwards the bardāsht, which consists likewise of certain times, played by the whole band. This is followed by a pianissimo, and a crescendo passing over into a diminuendo;
2. The playing of the four times called ikhlati, ibtidai, Shirazi qalandari nizar qatra, or mukhud qatra, which occupies an hour. The playing of the old Khawarizmite times of these His Majesty has composed more than two hundred, which are the delight of young and old, especially the tunes jalalshahi, Mahamir Karkat (?), and the Nawrozi. 4. The swelling play of the cymbals.
5. The playing of Ba miyan dawr. 6. The passing into the tunes azfar, also called rah-i-bala, after which comes a pianissimo.
7. The Khawarizmite tunes played by the Mursil, after which he passes into the mursali; he then pauses, and commences the blessings on his Majesty, when the whole band strikes up a pianissimo! Ibid., Line 19-33.

The band was played on two occasions. Among the solo items the surna was blown before sunrise. This was followed an hour latter by Kwarga, qarna, nafir and other band instruments. The surna was blown against sometimes afterwards and was followed by the naqqaras. The programme went on final performance of the surna.

It is obvious that each item had a particular significance. These were rather devices for announcing the timings of various routines, a practice continued by the Nawabs under the British Raj and which died away with the merger of their States in the Union.

The ornamentation of the musical-instruments is done on their parts: neck, key-board and resonators. Often the upper end of the neck is crowned with delicate carving employing the motifs of flowers, animal's head in their traditional form. The resonators of the Veena, the Tambura and the rubab etc. are decorated with bands of lines, geometrical patterns and ornamented flowers.

-
62. "Formerly the band played four gharis before the commencement of the night, and likewise four gharis before day break; now they play first at midnight, when the sun commences his ascent, and the second time at dawn". Ibid, line 9-12.

(e) UTENSILS

Utensils used in the Mughal court must have been of a great variety, but the scenes depicting them being few in number the knowledge gathered from them can not be more than skatchy. Utensils are represented in the scenes of feast and festivities and in formal gatherings.¹ Besides their representation in domestic scenes, one may occasionally find their stylized and purely ornamental forms employed as emblems or symbols in the ensigns of the royalty viz :
²
alams. Various categories of the utensils with commemorative ornamentation displayed in the miniatures, are of importance in providing information on the technology and tenor of life of a given period. These may be roughly divided into six groups: Kitchen pots; serving pots comprising of dishes; decorative utensils; drinking pots and cutlery.

The kitchen pots have mostly broad faces, small necks and round or spherical body with oval or flatish bottoms. These are all of large, size, obviously as each of the item of a meal was cooked in a large quantity, simple of shape, nevertheless decorated on the surface with geometrical patterns.

-
1. Razm; pl. 5 (Baroda), pls. 37,38,84,88,121,125,199(Jaipore); Akb; ff. 6b, 54,169 (C.B.); pls. 27,28,32,74,94,113 (V.A.); Diwan; ff. 30,116,211,247(Rampur); Anwar; ff. 5,93,100,178,190 (Varanasi); Tarikh; ff. 4b,6b,20a,40b,72a,104a,118a,131b,136b, 205b, 245a (Patna).
 2. Akb; f. 226b (C.P.) pl. 15 (V.A.); Razm; pl. 72 (Jaipore); Tarikh; ff. 11b, 14a,23b,24b,73b,202a,227b,238a,337b(Patna).



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12

PLATE XCIX

The serving pots are of various types, their shapes differing according to the item each of it was ment to serve. There are long and shallow, sometimes deep dishes for containing fruits, bowls provided with or without lids, oval or semicircular dishes for holding liquid foods, large platters for rice preparations, long serving dishes the kind of which is known as Qab for vegetable and meat preparations and trays for holding full roasted birds or large pieces of meat. There are wine-containers like the long narrow-necked flasks reminiscent of the Persian mina, beautiful jars and drinking bowls and cups, the familiar payala and surahis of the Persian poetry.

Utensils used purely for the decorative purposes included big and small flower-pots, candle-sticks and zair-i-itradan - a stand employed to hold the pot of perfumes.

Degchi; (plate XCIX; figs. 1-3).

³
The degchi or the cooking pot is infact a version of the modern deg. There are a few folios showing this utensil.. Broadly, these are all of the same shape with a minor change in their form. The body could be round, or oval or hemi-spherical in shape with flatish or ⁴ or elliptical bottoms. In a few folios ~~one of~~ the cooks are shown with a long spoon (Persian Kafgir). It is provided with a long handle and a round bowl at the end, The cooks employed it in trans-

3. Akb; pls. 28, 97(V.A.); Anwar; f. 178 (Varanasi); Tarikh; f. 118a (Patna).

4. Akb; pl. 28; Tarikh; f. 118a (Patna).



PLATE C

ferring the foods from the degchis to the serving dishes.

5
Gharva, smaller in size than degchi could also be used as cooking pot. It is made of clay with a broad opening, small-neck and elliptical body. It has resembled more with the Kalsiya of the modern times than with any of our cooking utensils (ibid; fig. 4).

For holding the water etc. jugs of varying sizes are used. Basically these are similar in shape and consist of large body-round or egg-shaped with a small neck and broad opening. Mostly their bottoms are elliptical, though, sometimes a high base is provided to the pot (ibid; figs. 5-12).

7
 Handles are rarely attached with body. The manuscript of Razmnama (Jaipore) displays pitchers consisting two handles - curved like an ear, on either sides. Scenes depicting Ashavamegha - Yagha or Havan etc. help us to provide a variety in forms and decoration of pitchers-known as Kalash.

8
 Small jugs known as lota, employed to carry and serve the water, are of great variety represented by the Mughal painters(plate C; figs. 4-11).

5. Akb; pl. 97(V.A.); Razm; pls. 124, 134 (Jaipore).

6. Akb; 32 (V.A.); Anwar; ff. 93,100 (Varanasi); Razm; pl. 5(Baroda); pls. 14,18,88,121,122(Jaipore); Tarikh; ff.40b, 72a, 132a(Patna).

7. Razm; pl. 14, 122 (Jaipore).

8. Akb; pl. 61,75 (V.A.); Razm; pls. 4,36,91,125,131(Jaipore); Diwan; f. 211 (Rampur).



PLATE CI

A lota resembled pitchers mentioned above, with a difference of a spout and handle. Handle could be attached on one side, or on the top of the lid, or a little below the neck in a circular form (ibid; fig. 4 - 6). The lota used by Hindu saints, known as Kamandal has the handle of the latter type. It could be with or without a spout, consisting of an oval shaped body, a small base and narrow opening. It is carried vertically like a bucket (ibid; figs. 8-11). Lota used by masons or labourers, is rarely represented in miniatures. Plate 86 (Akb; V.A.), which shows the construction of the Fatehpur Sikri - buildings; has displayed one of its type. It is made of earth consisting a small body, flatish bottom, small neck opening broadly like a funnel and a small spout for poring out the water. This type of lota is known now a days as badhna.

Dishes; (plate CI).

The dishes include Qabs, platters, bowls, fruit-dishes and Surahi - containers.

¹¹
Qabs are more or less of the same shape: Oval with broad mouth and gradually narrow towards the bottom. Some of them have flat bottom. Other have bases, small in height. Qabs have varied in their sizes.

9. Akb; pl. 61, 75(V.A.); Razm; pls. 5, 18(Baroda); pls. 4,36,91, 131 (Jaipore).

10. Plate C; fig. 7.

11. Akb; f. 6b(C.B.); pls. 23,27,79,94(V.A.); Anwar; f. 100 (Varansi); Razm; pls. 77,88,119(Jaipore); Tarikh; ff.4b,104a,118a(Patna).

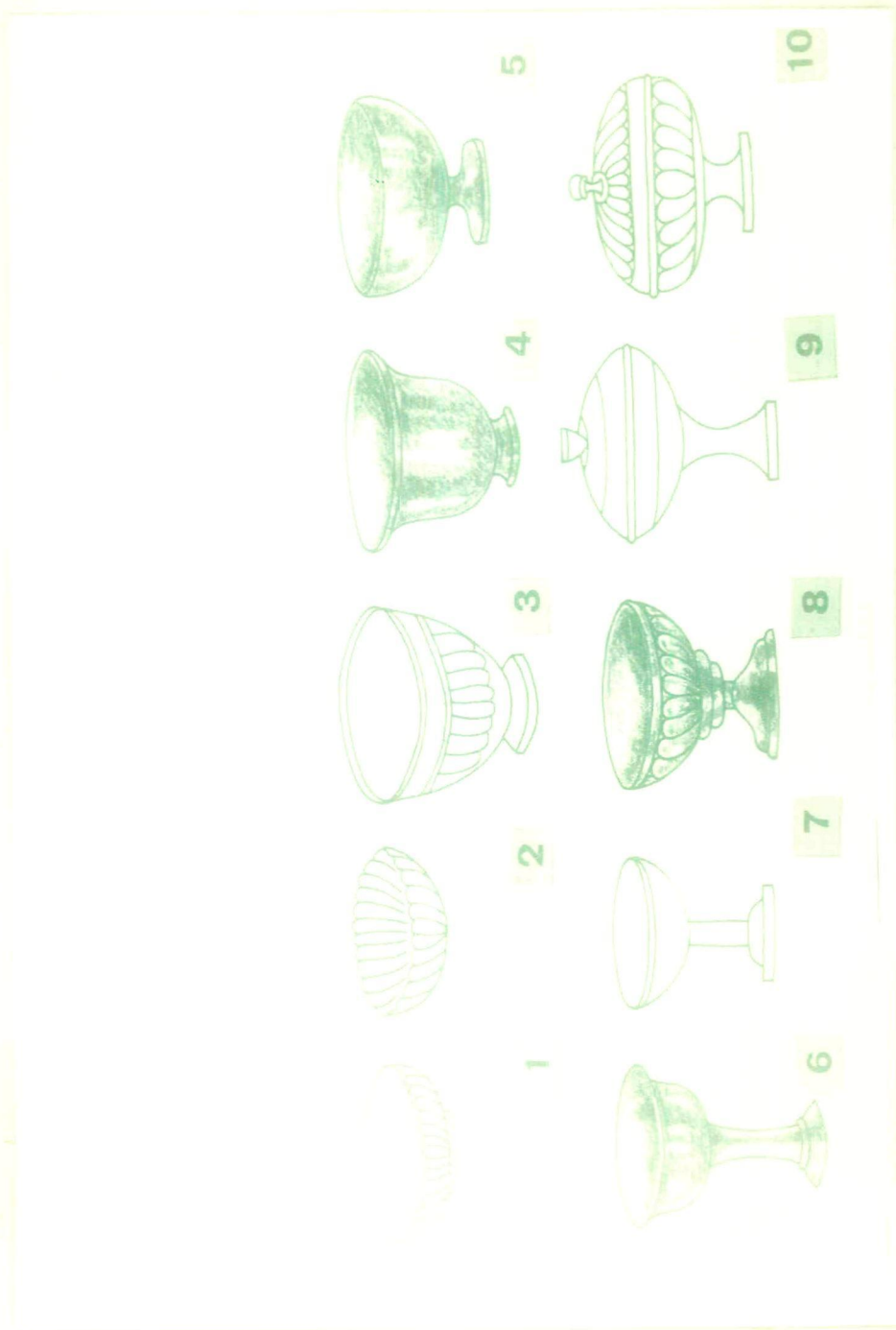


PLATE CII

12
Lids :

The lids are made in varying designs and forms depending on the shape of the mouth of the pot - a degchi, a jug, a bowl, a dish, a bottle - to be covered. Generally they are dome shaped slightly tapering down towards the edges which are concave or sometimes straight or oval and rarely convex. On the top of the lids are knobs - round, oval or pointed in shape (ibid).

Wine-pots :

Wine-pots include both drinking cups and containers

Payalas :

A great variety of their forms and designs are seen in the miniatures. These are small in size, and always with broad opening and the sides ¹³ gradually narrow towards the bottom. A few have flatish bottom and other a base raised from the ground. The stand which supported the bowl, has varied in height. Like Qabs, payalas are provided with ¹⁴ lids. A pyala, now a days known as jam; is represented in the Folio 54 (Akb. C.B.). It consists a cylindrical body, opening like a funnel. In large cups the body is slightly elongated upwards.

Containers :

Containers are of two types, distinguished by the absence or presence

12. Plate CI.

13. Plate CII.

14. Ibid; fig. 7.

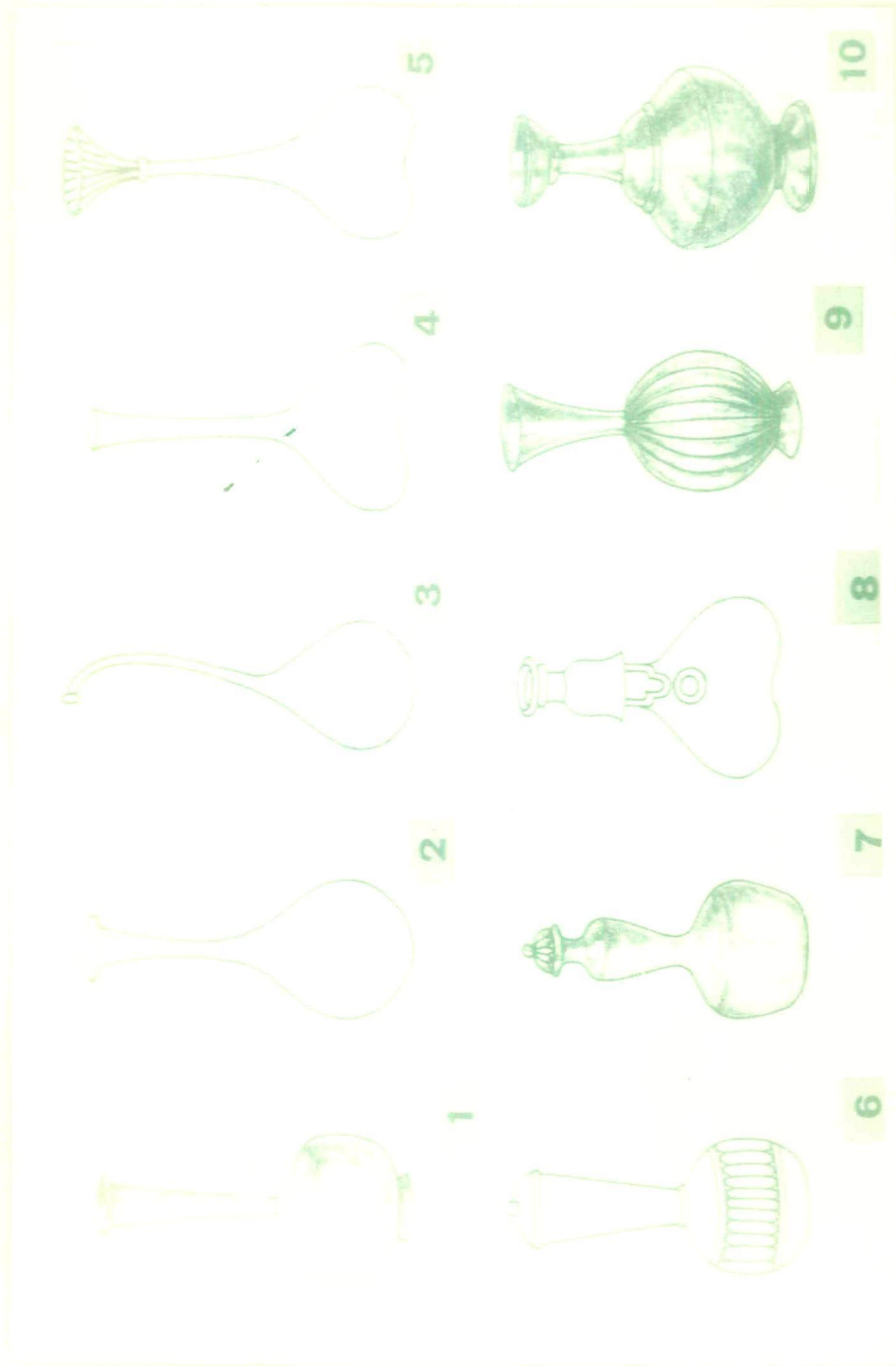


PLATE CIII (A)

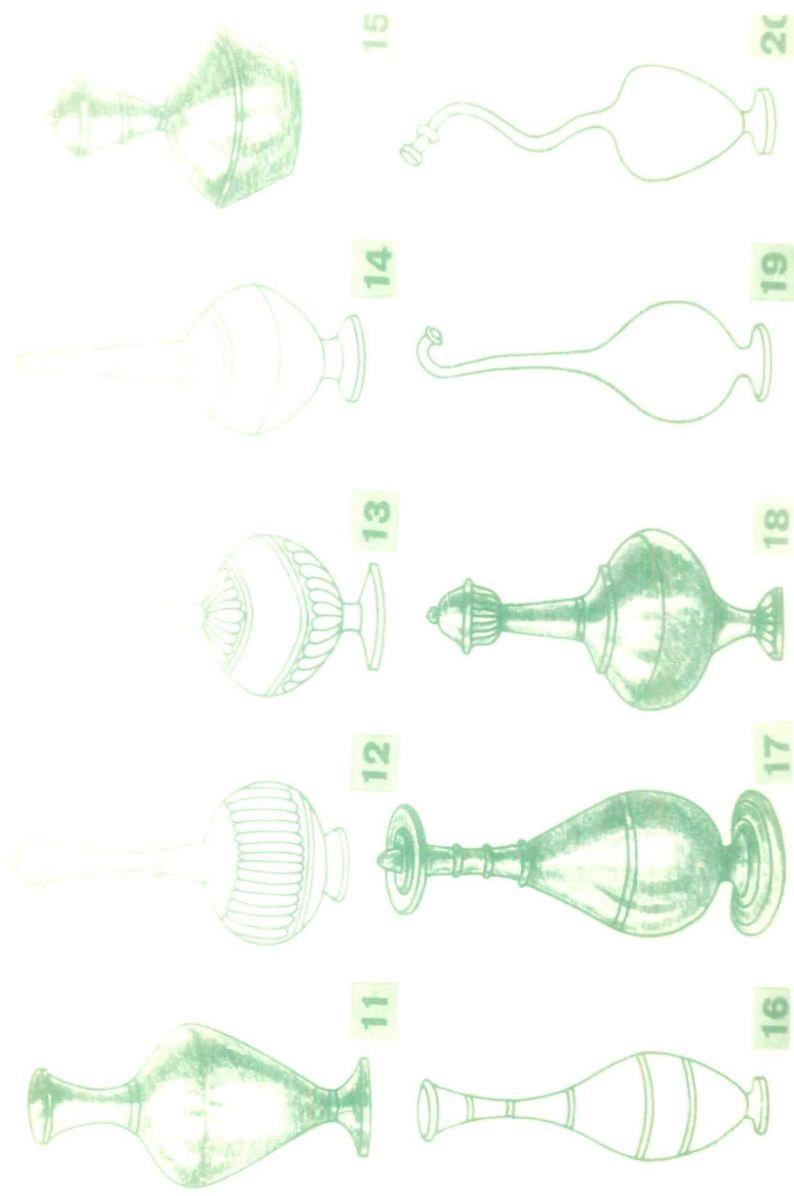


PLATE CIII (B)

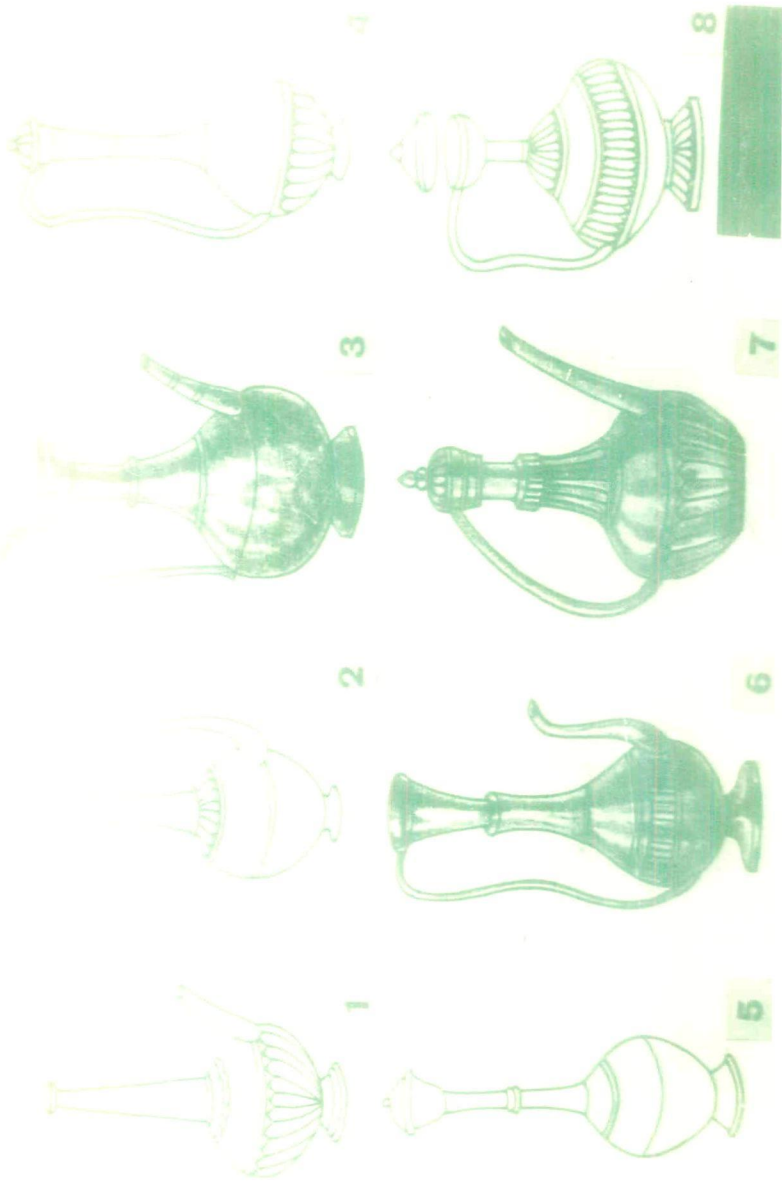


PLATE CIV

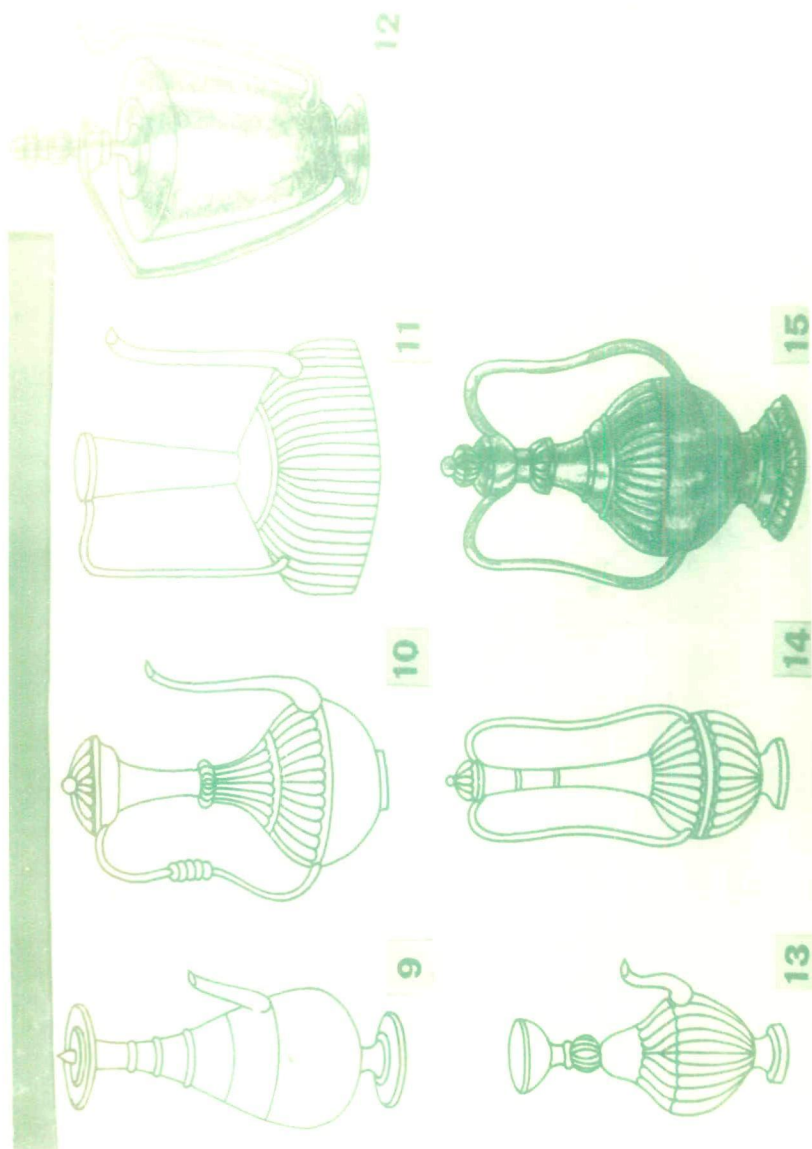


PLATE CV

of handles and spouts. The plain ones are the ¹⁵Surahis. They have long graceful necks with flower or funnel shaped mouths. Generally, the body, is round almost spherical. Their neck could be straight; or narrow in the middle; or curved in one side; or serpentine in form. Short necked Surahis are occasionally used. Surahis may or may not have a stand at bottom. A few Surahis have typical bottom - graduated ¹⁶in the middle.

Surahis could be carried outside, in a leather-case provided with a ¹⁷strip or loop to hang. The bag covered whole body of the pot, leaving the neck out. Besides it, a bottle made of leather, used even now a days in Rajasthan; could be carried by the soldiers etc. during the ¹⁸expeditions. It could be hanged with the help of a string fastened at the top of lid (plate CVIX; fig.7). This bottle resembled the Surahis in form.

The second type includes what is called in Persian as ¹⁹Mina. These are tall, beautiful Surahis but have spout - generally long, emanating from the middle or the bottom of the body. Spouts are mostly shaped like the stiff neck of a swan. There may be one or two handles on opposite sides sclaling the entire length of the pot and beautifully curved. The double handle minas do not have a spout. Instead they open like a Surahi and are covered by a lid. Rarely, we come across

15. Plate CIII; figs. 1-20.

16. Ibid; figs. 4,5,8.

17. Tarikh; f. 62a (Patna).

18. Akb; pl.6(V.A.); Razm; pl.43(Jaipore); Tarikh; pl. 63(Patna).

19. Plate CIV and CV; figs. 1-15.

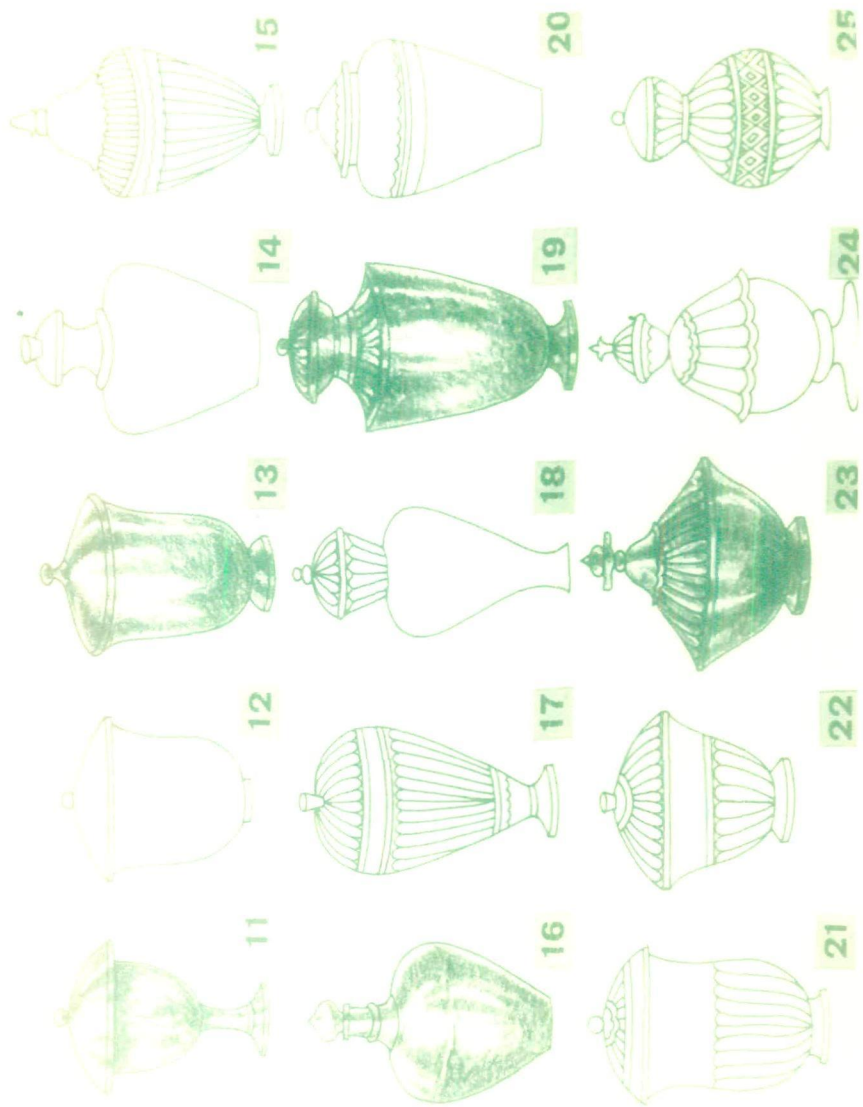


PLATE CVI

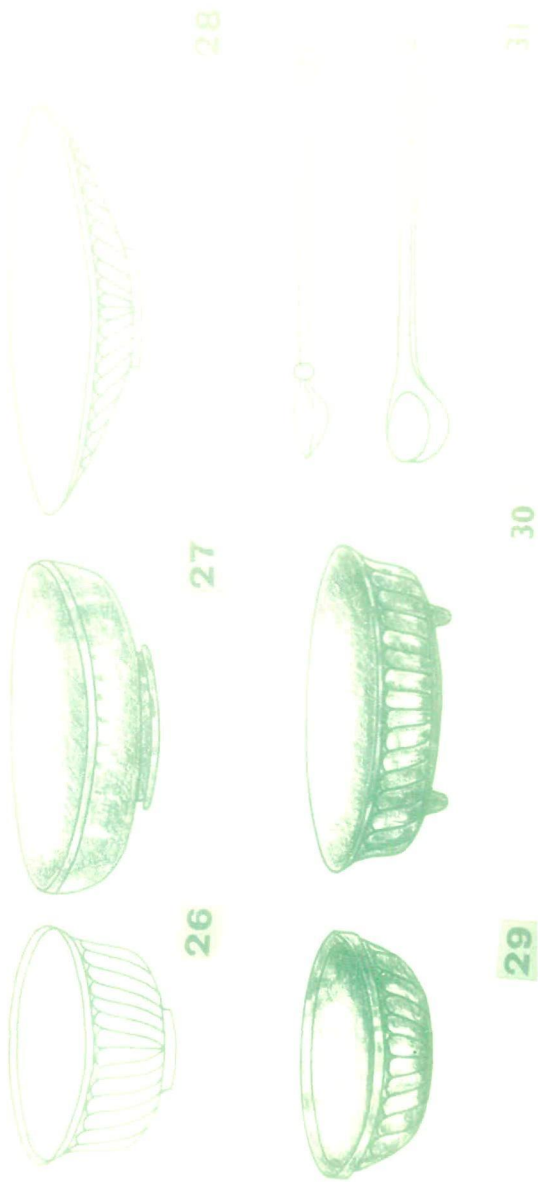


PLATE CVII (A)

a few minas which consists one handle and open like a Surahi. In one of the illustrations (F. 208 B.M. Tuzuk-i-Baburi) are shown three minas. Their double handles are shaped like a bow, emanating from the middle of the pot and ending upwards where string made of golden or silver chain ties the lid in the middle.

20

Besides the Surahis and minas, there are beautiful jars, generally long, hemi-spherical in shape with small neck and base. These are large in size than Surahis. Mostly, jars are broad at the centre and its sides gradually narrow down towards the bottom. Their lids are not different from those of Qabs in form and decoration. The jars opening like a funnel have closely resembled the bowls.

21

Surahi - containers :

To hold the Surahi and payalas etc. large and deep dishes are employed. Their sides project slightly inward; or outward; or sometimes upright. Base is always flat, so as to provide an even surface to the pots, to be kept inside. A few have a base raised from the ground, small legs are rarely fixed with bottom (pl. 94, Akb; V.A.).

Folio 6b Akbarnama (C.B.) has rarely represented an utensil, served as wash-basin. An attendant is displayed holding it while a noble is washing his hands. It is a large, deep dish provided with broad

20. Plate CVI; figs. 11-25.

21. Plate CVII - A; figs. 26-28.



PLATE CVII (B)



PLATE CVIII

22

mouth, flat bottom and sides projecting outward. It has closely resembled the dishes, used to hold the wine-pots.

23

Cutlery :

The cutlery includes only spoons and knives. The spoons have long stem. Their bowls are round like the soup spoon of our time. These are being shown handled in much the same way as we do - between the tips of the fore-finger, and the middle-finger and the thumb. The knives are smaller than daggers. The handle of the knife is plain, more or less rectangular. The blade is long, one edged and curved at the point. These are shown being used for cutting large pieces of roasted meat. There is no device like the fork or anything else for holding the pieces to be cut in place. This is being done with fingers of the left hand.

Fruit-dishes ; (plate CVIII; figs. 1-11).

These are richly ornamented in their form and a variety of which is represented. Broadly, these are like a Qab, provided with high

24

bottoms. Fruit-dishes could have conic stands. Depth of the pots

has varied. The manuscript of the Razmnama (Jaipore and Baroda)

25

display deep fruit-dishes. Generally these are shallow like a Qab.

Lids are not provided with them.

22. Ibid; fig. 29.

23. Ibid; fig. 31; Tuzuk; pl.24(Moscow); f.295(BM).

24. Razm; pl.6(Baroda); pls. 9,18,37,84,88,114,128,138(Jaipore); Tarikh; f. 61b (Patna).

25. Razm; pl.6(Baroda); pls. 9,18,37,84,88,114,128,138(Jaipore).

Flower-pots ; (ibid; figs. 12-15).

These are of various types : Conical or round like a pitcher, with a long or short neck; and with a high or low base. A round flower pot could have handles on either sides. They are also decorated. A flower-²⁷ pot can have two or more spouts about it for holding flower bunches. Plate 12 (Razmnama, Jaipore) shows a typical form of a flower-pot - comprising of a large bowl, with a high base, with the ends projecting upward. Flower-bases are nowhere seen.

Candle-sticks; hanging earthen lamps and zair-i-itradan are other decorative utensils are represented in the miniatures. The zair-²⁸ i-itradan is a high stand provided with a cup shaped pot at the top, to hold the pots containing perfumes. Their height has varied. It could be simple or ornamented (plate CVIX; figs. 1,2).

Candle-stick served the purpose to hold a wax-candle at the top - where a small, deep cup is provided. Stand could be conic or straight but²⁹ always flat at bottom. These are of different height (ibid; figs.3,4).³⁰ Abul Fazl has mentioned varying forms of the candle-sticks. There

26. Akb; pl. 52(V.A.); Razm; pl. 12 (Jaipore); Tarikh; pls.4,62(Patna).

27. Tuzuk; f. 208b (B.M.).

28. Tarikh; f. 118a(Patna); Razm; pl. 11 (Baroda).

29. Akb; pls. 9,27,79,94 (V.A.); Tarikh; ff.3b,5b(Patna); Razm; pl. 11 (Baroda).

30. "It is impossible to describe the beauty and various forms of the candle sticks and shades, and to give an account of the office of the workmen. Some of the candle sticks weigh ten mans and upwards, and are adorned with various designs; some single, others of two branches and more: they give light to the internal eye". Ain (Bloch.) Vol. I, p. 57.

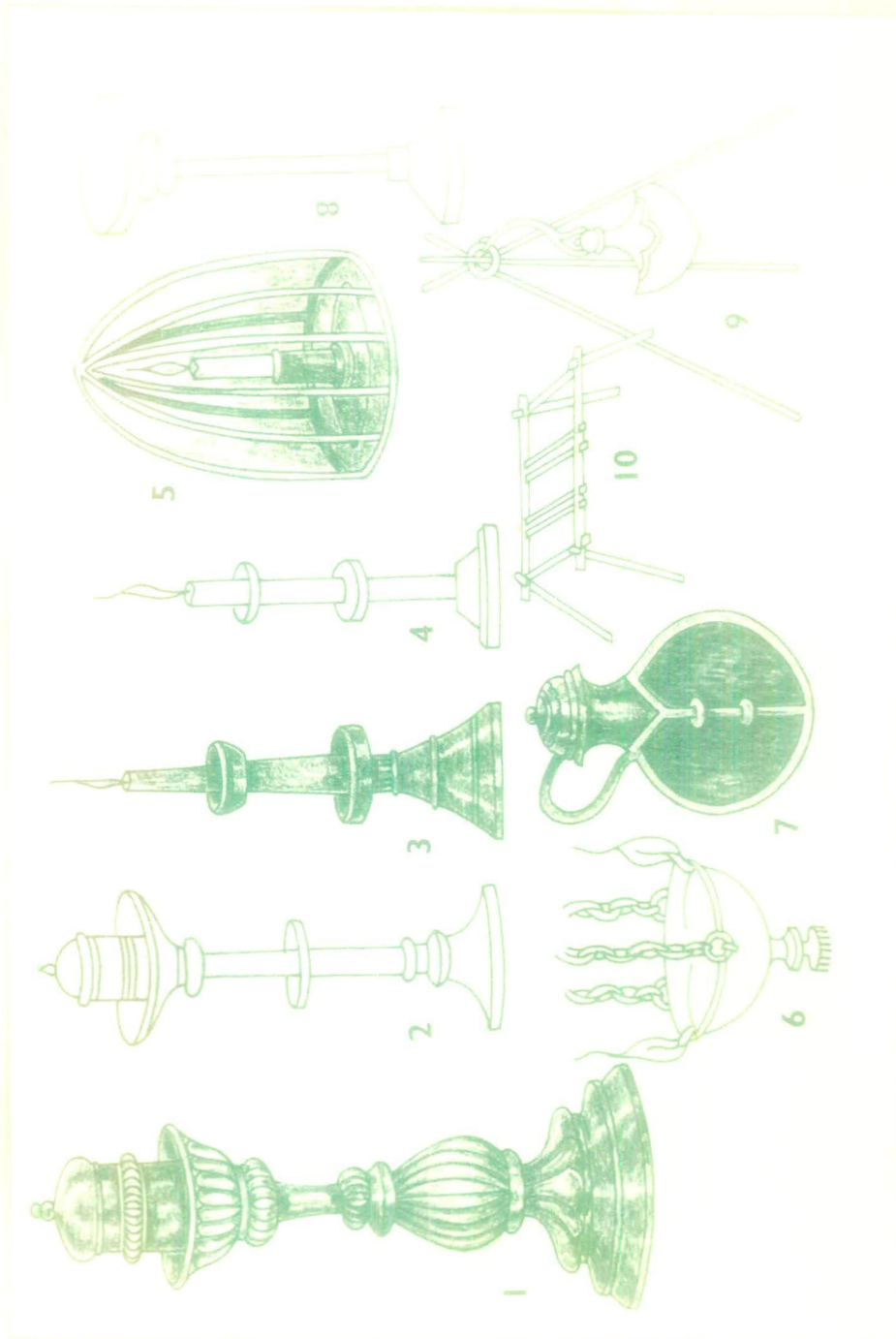


PLATE CVIX

could be single, or two or and more branches provided with cups at the top. Branches are richly ornamented with traditonal form of flowers, leaves and buds etc. Stylised forms of animals : birds etc. are also employed. He further describes of a candle-stick of one yard in hieght which holded a wax-candle of three yards in length; and to snuff the same a ladder was employed.³¹ Miniatures display only ³²
Yakshakha - single candle-stick.

Small candle-stick may be provided the glass-shades (ibid; fig. 5). Abul Fazl has mentioned the shades but has not given the description of it. The glass is framed on the metallic-cage moulded to the form of an half ellipse.

Besides wax-candles, oil-lamps were used inside and outside the palace.³³ Hanging oil-lamp provided with several wicks is rarely represented. The lamp consisted of a small bowl with broad opening. It has three rings on the outer edges, through which chains are passed to hang (ibid; fig.6). It is typically Indian in origin and fashion.

The small box; (plate CI; fig. 7).

To keep the food-stuff or other articles small-boxes are used. One of its type represented in the plate 119 (Razm; Jaipore) consists high sides slightly projecting outward, flat base and a dome shaped lid with a pinnacle at the top - similar to a Qab. It is a round, deep pot.

31. Ibid.

32. Ibid; plate V, fig. 3.

33. Razm; pl. 12 (Jaipore).

Grace, decorativeness and symmetry are the chief characteristics of the Mughal utensils. The stylised and geometric decoration has been employed without an interruption in its form. Particularly, interesting examples are seen in the forms of surahis and minas: zig-zag, serpentine necks and beautifully curved handles etc. According to the Ain, great³⁴ care was taken to preserve the shape and metal of the utensils. Metallic utensils were polished with rang after every few months. This practice is still prevalent in India though it is quite possible that it was³⁵ introduced by the Muslims in the middle ages.

The utensils used in the court were made of copper, bronze, gold and silver. The latter ~~once~~ were often studded^d with precious stones. With the passage of time the utensils of the early Mughals have got destroyed. The Ain also tells us that the utensils made of copper and bronze etc.³⁶ were replaced by the new. Those made of gold and silver have been melted. Victoria and Albert Museum, London, however has a gold spoon³⁷ studded with rubies and diamonds. It is ascribed to the time of Akbar. Its reproduction is included in this thesis (plate CVII - B).

34. "The copper utensils are tinned twice a month; those of the princes etc., once; whatever is broken is given to the braziers, who make new ones". Ain (Bloch.); vol. I, p. 61.

35. "The use of tins for coating household metallic utensils as a protection against acid food and metallic (copper) poisoning, may be said to have gained currency in India from the middle ages, possibly after the advent of the Muslims". History of Chemistry in Ancient and Medieval India; p. 217, Line 30-33.

36. 'Ain; Vol. I, p. 61, line 25-27.

37. "Nevertheless, a gold, ruby and diamond spoon of massive and simple floral design somehow escaped the melting pot. It may have been made in the workshop near the palace to which Akbar, according to Abul Fazl, paid regular visit". The Art of Mughal India; p. 31, line 15-18.

(f) TECHNOLOGICAL GADGETS

Akbari illustrations help us in gathering some knowledge about various kinds of Mechanical objects and implements which were used in those times. These are represented in scenes of wars, expeditions and other activities and are, as much insufficient to enable us to form any conclusive view with regard to their technological aspects. Nevertheless a general view can be formed as to the nature of such things as irrigational and agricultural gadgets, the saddle, the stirrup, the horse-shoes, fountains and fire arms etc. Some of these interest us by their form, others by the fact of their very presence, yet others by virtue of the demand they must have made on the technological skill of the sixteenth century craftsmanship. These questions are, however, beyond the scope of the present assessment. We can at the most study their forms or the modes of their workings, wherever possible.

Tools of agriculture and gardening :

Scenes depicting the farmer, or the gardener at work are few in number.¹
 Not all the tools used by them are therefore displayed. A few folios²
 in the Anwar-i-Suhaili (Varanasi) and Tuzuk-i-Baburi (Delhi) manuscripts display farmers ploughing their fields in the distant background. In garden scenes some labourers are shown at work with

1. Anwar; f. 113 (Varanasi); Razm; p. 118 (Jaipore).

2. Anwar; ff. 61, 113 (Varanasi); Tuzuk; f. 143 (Delhi).

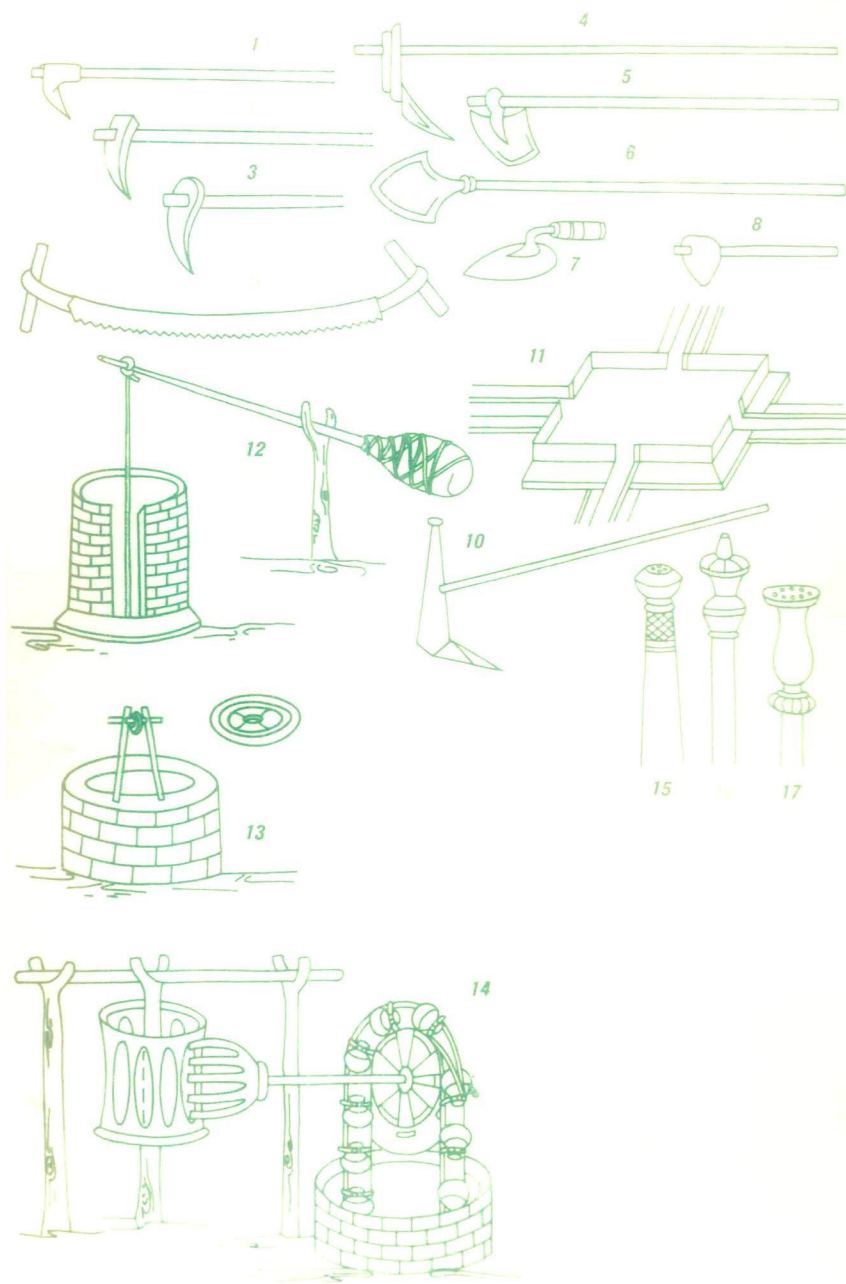


PLATE Cx

digging implements - the spade, the shovel (belcha) and the Kudal.

(a) Plough (hal) :

The ploughs displayed in the illustrations resemble in shape with the one used in the present times. It has a long implement bent at the lower part to make a sharp angle. The upper part which is the handle piece is longer and seems to have been made of wood. The lower part consists of a wooden projection right at the angle and to it attached the blade. The blade is sharp, pointed and of a conical shape. It is difficult to make out whether it was made of iron or wood (plate CX, fig. 10). The farmer must have had to be skilled in balancing the tool while a pair of bullocks or buffaloes pulled it.

The plough is associated with Balrama³, elder brother of Lord Krishna⁴; who wielded it as a weapon. The plough when employed as a weapon, could be made like a zaghmol⁵. The blade supported on a flat piece of wood is attached to a long handle.

⁶
(b) Spade :

This implement is provided with a broad, flat iron-sheet in which handle is fixed vertically. It resembles very closely with the spade now used for digging up soft or wet ground.

3. Razm; pl. 136 (Jaipore).

4. Plate CX; fig. 4.

5. Ain (Bloch.), Vol.I, p.117, No. 30; Infra p.

6. Plate CX; fig. 5.

(c) Shovel, (the ⁷belcha) :

It is made of flat iron-sheet with a long handle fixed in it horizontally. It differs from a spade. It has a concave inner surface which can hold a good quantity of earth. In a more refined shape the belcha has survived to this time. It is provided even with a leather flap to hang it by the shoulders. It is used for picking earth, dug up by a spade or a Kudal, or for levelling the ground.

(d) The ⁸Kudal :

The head of a kudal is long and pointed iron-piece, shaped like a wood-pecker's bill. At one end is fixed a handle. For digging hard, dry grounds the Kudal is very effective.

Besides tools the ⁹Tuzuk-i-Baburi (B.M.) depicts the method of sowing the seeds. The sower holds a long, tough sheet of coarse cloth done into a bag and hung by the shoulder. He takes a palmful of grains and scatters them in well measured swings of the hand at the regular intervals. This system is still used and is known as 'beej-bikherna'.

Means of irrigation

For the purpose of irrigation well and tanks were used, the former more commonly. The apparatus consisted of a pitcher or a bucket tied

7. Ibid; fig. 6.

8. Ibid; figs. 1, 2, 3.

9. Tuzuk; f.173 (B.M.).

to a rope. The water pulled by it was collected in a small tank by the side of the well and from it the water flowed through an opening into narrow aqueducts to the fields. The illustrations also show pulleys on the wells (plate CX fig. 13). The Delhi manuscript of Tuzuk-i-Baburi also shows a Persian-wheel being used for irrigation. The principle of the device is the same as observed in that used now a days in the villages and towns of India; but it appears to be comparatively primitive. Instead of tin buckets the medieval apparatus is made up of earthen pitchers tied between two long ropes and supported between horizontal bars which are fixed at both ends in the vertical wheel. The ropes with the pitchers move like belts about the wheel which rotates with a horizontal shaft fixed in the wheel's hub. The shaft is connected at the other end with a large gear wheel system, the horizontal component of which is moved by animal power. The illustration does not show the animals at work, but Babur has mentioned in his Memoirs. Most of the apparatus seems to be made of

10. Anwar; f. 16 (Varanasi); Tuzuk; f. 314a (B.M.).

11. Tuzuk; f. 122 (Delhi).

12. Plate CX fig. 14.

13. "In Lāhore, Dībālpūr and those parts, people water by means of a wheel. They make two circles of ropes long enough to suit the depth of well, fix strips of wood between them, and on these fasten pitchers. The rope with the wood and attached pitchers are put over the well-wheel. At one end of the wheel axle a second wheel is fixed, and close (qāsh) to it another on an upright axle. This last wheel the bullock turns; its teeth catch in the teeth of the second and thus the wheel with the pitchers is turned. A trough is set where water empties from the pitchers and from this the water is conveyed everywhere", Baburnama, Vol. II, 486.

wood. The gear is composed of a vertical crown-shaped wheel with long, pointed pegs. The other (horizontal) component is not a cogged wheel as we have today, but a vertical drum with wooden ribs all around it, which inmesh with the pegs.

Other device of pulling out water from the well, is the ¹⁴dhekli - as known now a days. The apparatus consists of a long pole supported on a vertical beam, provided with some weight at the lower end. On the upper part of the shaft, a rope is fastened to hang the bucket into the well. The length of the rope is enough to approach water. The rope is pulled downward by a man, to dip the bucket. Afterward the rope is jerked slightly, so as to go upward; following which heavier end of the pole comes down. The sooner bucket comes up to the ground level, man holds it, empties it and drops it again into the water. This process is done repeatedly. The dhekli is employed to irrigate small lands, now a days. A few other means of irrigation ¹⁵ have been described in the Memoirs of Babur.

14. Plate CX, fig. 12 ; Razm; p. 140 (Jaipore).

15. "In Āgra, Chandarwār, Bīāna and those parts, again, people water with a bucket; this is a laborious and filthy way. At the well edge they set up a fork of wood, having a roller adjusted between the forks, tie a rope to a large bucket, put the rope over the roller, and tie its other end to the bucket. Every time the bucket turns after having drawn the bucket out of the well, that rope lies on the bullock-track, in pollution of urine and dung, before its descends again into the well. To some crops needing water, men and women carry it by repeated efforts in pitchers". Baburnama; Vol. II, p. 487.

16

In his description of Hindustan Babur tells us that the people had no running water in their residences and gardens. He ordered the construction of huge tanks for storing water for irrigation and other purposes. In one of the illustration, Babur is shown supervising the construction of such a tank in a garden. The tanks displayed by the side of wells also served the purpose of watering the cattle. The river water was also stored in tanks, from which it was chanalised in various directions (plate CX fig. 11).

Mason's tools

19

The illustrations displaying construction of buildings have represented a few tools of masons which include a trovel (Karni) and a small hammer. The former is a flat-bladed hand tool for spreading mortar on bricks. Its blade resembled a kite in shape, and is made with one elongated end. Head of the hammer is pointed in one side. It is fixed to a small handle and is employed to break the stones etc.

Carpenter's tool

22

Saw is a carpenter's tools. However in the illustration a couple is shown operating their son by this tool. It consists a long flat

16. "Except their large révers and their standing-waters which flow in the ravines or hollows (there are no waters). There are no running waters in their garden or residences ('imartlar)."
Ibid; p. 519.

17. Tuzuk; pls. 40,42 (Delhi).

18. Tuzuk; f. 173 (B.M.).

19. Tarikh; f. 58b(Patna); Akb; pls. 45,46,86 (V.A.).

20. Plate CX. fig. 7.

21. Ibid; fig. 8.

22. Razm; pl. 116 (Jaipore); plate CX, fig. 9.

narrow blade with teeth at the lower edge and small handles on either ends, fixed vertically.

Fountains

These are shown in gardens and palaces of the king. Their basins are²³ constructed rectangular or square in shape without ornamentation.

The stem of a fountain is a simple masonry tube. It can have one²⁴ or more spouts of varying shapes. As many as six spouts could be²⁵ fixed on a single stem.

The Saddle

The frame of the saddle seems to be made of wood and curved so as to fit the back of the horse. It was padded up with felt and cotton rolls and covered with costly cloth, printed or embroidered taste-²⁶ fully. It appears from the Ain that saddle-cloth was specially²⁷ made for the purpose. The saddle used by ladies was similar to that used by the men.

The Stirrup : (or rakab)

Leather or cotton flaps were used for stirrups. The foot-rest was made up of iron or wood. It was a U-shaped piece with a flat base.

23. Razm; pls. 31, 118 (Jaipore); Tarikh; ff. 3b, 4b (Patna); Razm; pls. 4, 16 (Baroda); Diwan; f. 7 (C.B.); f. 19 (Rampur).

24. Plate CX, figs. 15, 16, 17.

25. Tuzuk; ff. 173, 295 (B.M.).

26. Ain (Bloch); Vol. I, p. 143-5.

27. Tuzuk; pl. 32 (Moscow); Tarikh; f. 7b (Patna).

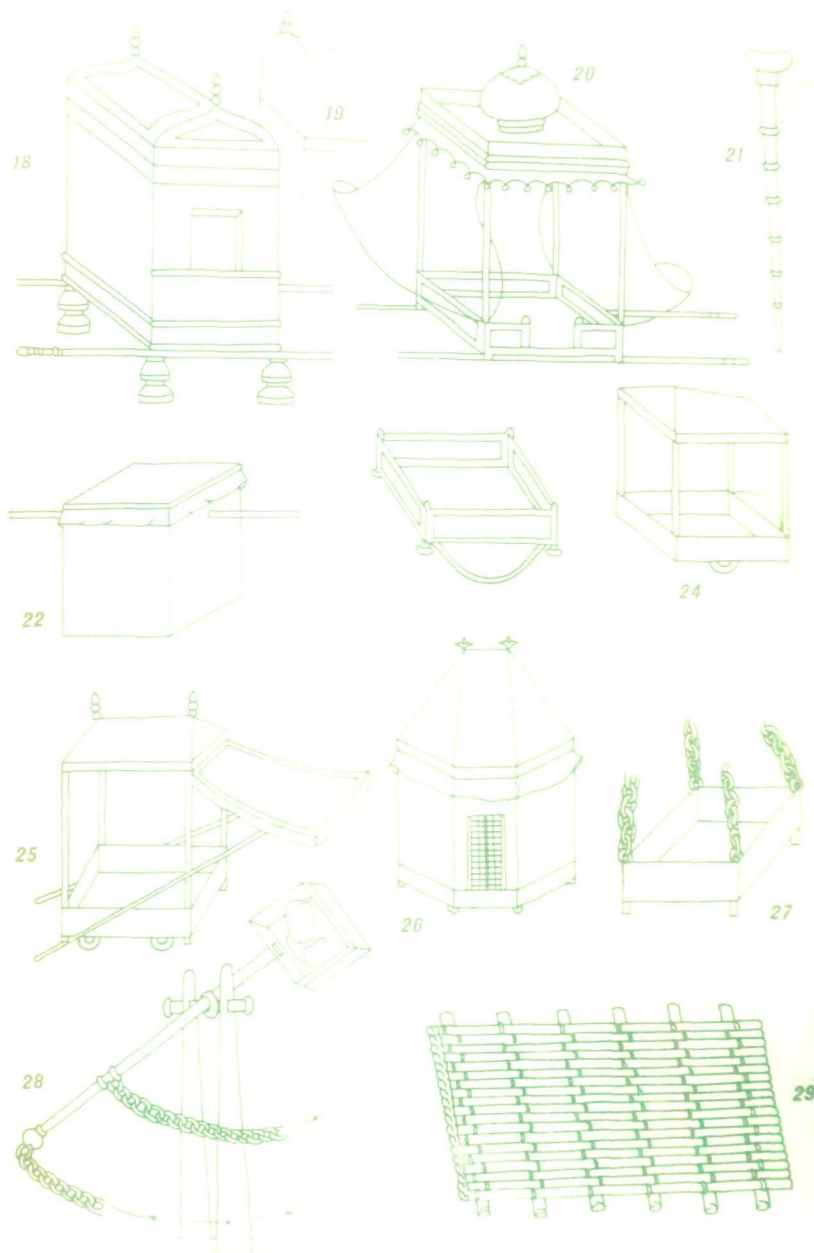


PLATE Cxi

The horse shoe : (or nal)

A horse in action is generally shown with one of the fore-feet turned backwards so as to expose the horse shoe to the view. The shape is not different from that of the one used today. It must have²⁸ been made of fine steel or iron. The Ain tells us that these were changed twice a year.

Conveyances

The Howdah and Imari

Besides a few, various gears used in connection with elephants are²⁹ described by Abul Fazl in the Ain. The elephants when driven in the³⁰ battle fields are provided with howdah, fastened on their back. It is a uncovered rectangular^{er} box made of wood with high sides- quite enough to protect a soldier sitting in it. Loops are there on either sides to fasten it.

³¹ The imari is similar to the former with the difference of a canopy. A seat with canopy is called imari. Both the imari and howdah are shown mounted on elephant's back in the battle-fields, though the latter is meant for this purpose. The imari consists a comfortable seat with a support at the back. The canopy rests on four thin poles.

28. "Nal or horse-shoes, are renewed twice a year. Formerly eight dāms were given for a whole set, but now ten". Ain (Bloch); Vol. I, p. 145.

29. Ibid; pp. 134-137.

30. Steingass; p. 1517(a seat to place on an elephant's back); plate CXI, fig. 23.

31. Ibid; p. 866(A canopied elephant letter); plate CXI, figs. 24, 25.

Litters

It is a rectangular seat provided with a canopy, carried on the shoulders of two or four men. Both ladies and gents travelled in litters. The litters used by ladies, are covered on sides. One or two windows may be provided for cross-ventilation. These are covered with wooden blinds. Seats are made comfortable with cushions and gaw-takyias etc. Long poles are connected with the bottom lengthwise on either sides. The palaquin bearers carried it on their shoulder. They held crutches in their hand for support. The top of a crutch is provided with a wooden piece having depression in the middle so as to fit the arm-pit. Litters are made in varying size and embellished with cloth bands and thread-work.

A wooden-case similar to the howdah, could be employed to lower down the soldiers from the top of a hill into a valley. It is provided with chains on either ends, which are connected with the main chain. The case accommodated four to six men at a time. It is lowered down like a bucket. The main chain is left loose by the men holding it at the top, so as to come downward.

A machine called manjaniq employed in lifting heavy stones represented in the manuscript Tarikh-i-Alfi (Patna), consists of a long pole having a wooden-case at the upper end and two long chains at the lower part. The pole rested on a horizontal bar attached to the beams fixed

38. Plate CXI, figs. 18, 19, 20; Tarikh; ff. 143b, 230a, 238a (Patna); Razm; pl. 13 (Jaipore); Akb; f. 25 (C.B.); pl. 77 (V.A.).

39. Plate CXI, fig. 21.

40. Plate CXI, fig. 27; Tarikh; ff. 69b, 122a (Patna).

41. Ibid; fig. 28; Steingass; p. 1324(a).



PLATE CXII



PLATE CXIII

vertically on the ground. In its still position, upper end of the pole rested on the ground. Stones are kept inside the case. Sooner the chains are pulled by men, this end goes upward. In the illustration this gadget is shown employed in a siege to throw stones inside the fort from a safer distance. For the purpose it seems that the apparatus was made of high beams so as to give a long swing to the stones, and the chains were pulled in a force.

Boat

42

Boats are quite frequently represented in the illustrations. These are shown engaged in loading or unloading the camp material; crossing the river; in the battles and sieges and journeys etc. etc. For various uses different type of boats, varying in size and shape are made. Commonest and simple in form is a boat engaged for small journeys. It has a small squarish-plateform at a end. The sides are gradually narrow towards the other end, to a point. Top-view of the boat appears like a long, pointed leaf. The end is mounted with a cusped shape flower, or a pinnacle, or a knob, or sometimes head of a dragon. A boatman rowed it with a paddle. It is made with a broad, flat, egg-shaped blade attached to a long handle.

42. Razm; pls. 121, 140 (Jaipore); Akb; pls. 6, 13, 21, 22, 28, 47, 48, 64, 97 (V.A.); Tarikh; ff. 17a, 51a, 55b, 101a, 103b (Patna).

43. Plate CXII, fig. 2.

44. Ibid; figs. 1, 2, 9.

45

Boats engaged in battles and journeys etc. are deep and large in size. Both the ends are projected upward. One of it ends in a platform. The other always ends to a point mounted with the head of a dragon, a bird, or a animal. Among them heads of a duck, a ram, a horse etc. are favoured. The serpentine necks of the dragons, elongated beaks, furious expressions are affiliated to the Chinese decore of an object. These heads of the animals may be associated with Islamic tradition⁴⁶ and considered as their traditional emblems. The boats engaged in royal services are embellished with Yak-tails, attached at one end. Sometimes a flag is also fixed with the platform.

Boat engaged in a battle is provided an extra apartments in either⁴⁷ sides for soldiers. The main seat erected in the centre is made with a canopy. Boatmen took their positions in the belly of the boat and rowed it.

An assembly of the courtiers and nobles etc. could be held on a pavilion⁴⁸ erected on small poles in the middle part of a huge boat. Attendants etc. stayed down the pavillion. It is made with side⁴⁹ railings and occasionally a shamviana could be provided for shade.⁵⁰ The platform at the end may be flat or furnished with a small room.

45. Ibid; figs. 5,6,7.

46. Ibid; figs. 5,8; Akb; pls. 47, 48 (V.A.).

47. Plate CXII, fig. 5; Akb; pl.47 (V.A.).

48. Ibid; fig. 8.

49. Akb; pl. 48 (V.A.).

50. Plate CXII.

Journey boats are generally made with a pavallion having a canopy.⁵¹
 Double-deckers⁵² are also used. For ladies, boats are made with small compartments, covered from the sides.

Boat-bridges are made to cross the rivers. For this purpose specially⁵³ designed boats are choosed. These are shallow, flat-bottomed with one square-end. Other end is pointed. It has resembled the punt of today. Several such boats are placed in a row approaching the banks of a river. These are inter-connected with one another and fastened with the poles fixed in the grounds on the river sides. On this foundation a plateform made of poles, beams covered with straw and clay etc. could be prepared. The army with their animals: elephants, horses etc. crossed over the bridge.

Boats are rowed by the paddles or long poles. A paddle is made⁵⁴ with flat, broad plank at the lower end. The mast and sails are⁵⁵ employed in large boats. The pole is also provided with a cross-bar⁵⁶ to make row easy. The body of a boat is made of wooden planks wedged

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51. Tarikh ; ff. 51a, 55b, 101a, 103b(Patna); Akb; pls. 6,47(V.A.).
 52. Plate CXII, fig. 6; Anwar; f. 190 (Varanasi); Akb; pls. 38, 48 (V.A.).
 53. Plate CXII, fig. 4.
 54. Ibid; figs. 1, 2, 9.
 55. Anwar; f. 190 (Varanasi); Tuzuk; f. 504 (B.M.); Diwan; f. 284 (Rampur).
 56. Tuzuk; pl. 69 (Moscow).



PLATE CXII

one into the others. There is no hull.

According to the Ain Akbar paid much attention to the building of⁵⁷ boats and supervised their supply as well. Bengal and Sindh were the centres of boat-building. In Thatta alone 40,000 vassels were⁵⁸ always kept ready. These were built for transport, sieges and trade. Their shapes and sizes varied accordingly.

Besides the boats, rafts were also used for crossing rivers. A raft⁵⁹ was a flat plane made of bamboo and wooden poles fastened together like a mat. The platform had sufficient space to accommodate four to eight men at a time. A few of the illustrations display Babur⁶⁰ sitting on a raft. It was not rowed but pushed by several boatmen by the logs provided across the bottom. The raft seems to have been a practically successful means for crossing small rivers.

Fire-arms

Guns appear in scenes of war, siege and occasionally hunting. Broadly these can be divided as heavy and light guns which have been already⁶¹ described. Heavy guns or cannons were used in battles and sieges;

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57. "The government of India under Akbar, however, as might be naturally expected, gave a great impetus to Indian shipping and ship building, especially in Bengal". Indian Shipping; p. 339.
58. "The means of locomotion is by boats, of which there are many kinds, large and small, to the number of 40,000". Ain(zarret); Vol.III, p. 339.
59. Plate CXI, fig. 29.
60. Tuzuk; f. 333 (B.M.); pl. 33 (Moscow).
61. Infra; pp.

while light guns were used chiefly for hunting. Babur tells us that⁶² the matchlockmen took part in the battles of Khanwa and Panipat. He⁶³ has also described the method of manufacturing a gun. Under Akbar manufacturing of guns was greatly improved and Abul Fazl says that no artillery with the exception of that of Turkey stood comparison⁶⁴ with the Mughal artillery in number and variety of fire-arms.

The gun was normally carried on the shoulder. There was no folding device in the middle, but the whole gun was a long barrel from end to end. It was fitted on a one-piece wooden rest. Towards the back-side the wooden rest was thick almost cylindrical. This was the butt. The fore part of it was as thin as a pipe and gradually tapering upto the end being the thinnest below the nozzle. It was worked like the original matchlock without a trigger. With this

62. Baburnama; vol. II, p. 469; 569.

63. Ustad - 'Ali-quli had been ordered to cast a large mortar for used against Biana and other forts which had not yet submitted. When all the furnaces and materials were ready, he sent a person to me, on Monday the 15th of the month, we went to see the mortar cast. Rowed the mortar - mould he had had eight furnaces made in which were the molten materials. From below each furnace a channel went direct to the mould. When he opened the furnace- wholes on our arrival, the molten metal poured like water through all these channels into the mould. After a while and before the mould was full, the flow stopped from one furnace and after another. Ustād 'Ali-quli must have made some miscalculation either as to the furnaces or the materials. In his great distress was for throwing himself into the mould of molten metal, but we comforted him, put a robe of honour on him and so brought him out of his shame. The mould was left a day or two to cool; when it was opened. Ustād 'Ali-quli with great delight sent to say, "the stone chamber (tāsh-awī) is without defect; to cast the power compartment (dārū-khāna)". Ibid, p. 536-7.

64. "With the exception of Turkey; there is perhaps no country which in its guns has more means of securing the government than this". 'Ain (Bloch). Vol. I, p. 119.

shape and working, it is quite obvious, that the guns used during those time were only smaller versions of the cannon. They must have been pretty cumbersome and unwieldy to be useful for quick action.

65

We come across of a few hand guns provided with cock, ramrod and ⁶⁶pārgaz. The sooner the ramrod is pressed, cock hammers the priming pan - containing some sort of ingetious material; and ball of gun shot are shoved in the barrel through the nozzle.

Cannons are no different from those used in the later period. The miniatures however do not contain many illustrations of this weapon which shows that the emperor depended on cavalry while the cannons were used casually. Their nozzles were made of varying size. Akbar ⁶⁷ introduced the system of moulding the nozzle into parts and these could be taken separately during expeditions and assembled together when required. This device made them easily portable. Further a nozzle in one-piece could be made by rolling obliquely to a flat, ⁶⁸long iron sheet. Either edges of the sheet overlapped one another forming a roll which gradually narrowed towards the end. And then the fold is joined. Under the another process long, cylindrical

65. Plate LXXXV, figs. 1-3.

66. Ain (Bloch.) Vol.I, p. 121.

67. "He made a gun, on marches, can easily be taken to pieces, and properly put together again when required". Ibid; p. 119.

68. "His Majesty has invented an excellent method of construction. They flatten iron, and twist it round obliquely in form of a roll, so that the folds get longer at every twist; then join the folds, not edge to edge, but so as to allow them to be one over the other, and heat them gradually in the fire." Ibid; p. 120.

iron bars are pierced with an iron pin. The rod is pierced when
it is hot. Three or four such pierced bars when joined together,
69 70
make a gun. Small nozzles required only two bars.

Besides the various types of guns described in the Ain, the gun
71
made with seventeen nozzles and shot by one match has escaped the
artist's view.

69. Ibid.

70. Ibid.

71. "His Majesty joins seventeen guns in such a manner as to be
able to fire them simultaneously with one match." Ibid; p. 119.